POOR LEGIBILITY

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ExxonMobil
Environmental Services Company
3225 Gallows Road
Fairfax, Virginia 22037

SFUND RECORDS CTR
2247926

ExxonMobil

October 24, 2011

Via UPS Overnight

Keith Olinger, SFD-7-5
United States Environmental Protection Agency, Region IX
Superfund Division
75 Hawthorne Street
San Francisco, CA 94105

Re: Omega Chemical Corporation Superfund Site
U.S. EPA Request for Information

Dear Mr. Olinger:

Please accept this letter and its attachments as the response of Exxon Mobil Corporation (hereafter "ExxonMobil") to the Section 104(e) information request (the "Request") that EPA sent in connection with the Omega Chemical Superfund Site ("Omega" or the "Site"). That Request was received by ExxonMobil in July 2011. Thank you for extending the deadline for the response.

GENERAL OBJECTIONS

This Request is overly broad and unduly burdensome and seeks information that is irrelevant and not calculated to lead to information that can legally be obtained under Section 104(e) of the CERCLA and therefore exceeds EPA's statutory authority under CERCLA. Section 104(e) of CERCLA grants "[a]ny officer, employee, or representative of the President, duly designated by the President..." the right to seek information under Section 104 (e)(2) through (4) of CERCLA. EPA has been designated by the President. Section 104 (e)(2) allows EPA to seek the following information:

> (A) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility.
>
> (B) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility.
>
> (C) Information relating to the ability of a person to pay for or to perform a cleanup.

EPA may also enter "[a]ny vessel, facility or establishment, or other place or property...." and take samples. 42 U.S.C. § 9604(e)(3). Similarly, EPA may inspect such locations and take samples. However, Section 104(e)(1) indicates that EPA's authority under 104(e) "may be exercised only for the purposes of determining the need for response, or choosing or taking any

response action under this subchapter, or otherwise enforcing the provisions of this subchapter." 42 U.S.C. § 9604(e)(1).

Thus, while EPA may require the submission of relevant information for the appropriate purposes, its authority is not unlimited. Even EPA's enforcement rights are limited. EPA may ask the Attorney General to commence a civil action to compel compliance with a 104(e) request, but, by statute, the court can only direct compliance with a 104(e) request if "there is a reasonable basis to believe there may be a release or threat of a release of a hazardous substance." 42 U.S.C. § 9604(e)(5)(B). Even then, it cannot do so if "under the circumstances of the case the demand for information or documents is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. § 9604(e).

ExxonMobil, as set forth in the following pages and the attachment hereto, is providing to EPA the information readily available to ExxonMobil. Moreover, ExxonMobil is willing to provide any additional specific information requested by EPA in compliance with CERCLA to the extent that it is relevant and reasonably available. However, both ExxonMobil's response and any future information it may provide are subject to the following objections (hereafter the "General Objections"):

1. ExxonMobil objects to the Request to the extent that it seeks information beyond what is authorized by Section 104(e).

2. ExxonMobil asserts all applicable privileges and protections it has with regard to EPA's enumerated inquiries including the attorney-client privilege, the attorney work product doctrine, and materials generated in anticipation of litigation, and has attempted to exclude such materials form this response. As a result of providing any of the documents or information included in its response to EPA's request, ExxonMobil does not waive any privilege, including attorney work product protection, that may apply to any documents or information concerning the same subject matter which are privileged, confidential or subject to attorney work product protection. In addition, ExxonMobil asserts all applicable privileges for materials which are proprietary, company confidential, or trade secret.

3. The Request is overly broad and unduly burdensome in that it seeks information or documents regarding facilities prior to and after ExxonMobil's ownership or occupancy of the facilities. As such, each of these requests exceeds EPA's statutory authority under CERCLA and contravenes ExxonMobil's rights.

4. ExxonMobil objects to any requirement to produce documents or information already in the possession of a government agency, already in the public domain, or previously provided to EPA. Such requirement is duplicative and, therefore, unnecessary and burdensome.

5. ExxonMobil disavows any obligation to supplement these responses on an ongoing basis. CERCLA Section 104(e)(2) authorizes EPA to require submission of information upon reasonable notice. ExxonMobil, either directly or through the CSC, had already provided all relevant and readily available information to EPA. Notwithstanding the foregoing, if more information is desired, ExxonMobil is willing to provide additional information if specifically requested by EPA in the future and in compliance with CERCLA provided that the information

is relevant, reasonably available, has not already been provided, and is not otherwise subject to these objections.

Notwithstanding and without waiving these objections, and subject to them, ExxonMobil has prepared this response based upon the information available to it. Where questions or definitions are vague, ambiguous, overly broad, unduly burdensome, or beyond the scope of EPA's authority pursuant to Section 104(e) of CERCLA, ExxonMobil is making appropriate and reasonable efforts to provide responsive information based on ExxonMobil's interpretation of the Request. To the extent that information submitted herein is not required by law or is otherwise outside the scope of EPA's 104(e) authority, that information is voluntarily submitted. ExxonMobil waives no rights or protection of information it voluntarily submits.

RESPONSES

Subject to the foregoing, ExxonMobil provides the following responses:

For All Respondents:

1. State the full legal name, address, telephone number, position(s) held by, tenure of, the individuals answering any of these questions on behalf of ExxonMobil Oil Company ...

Mark A. Zuschek
Exxon Mobil Corporation
3225 Gallows Road
Fairfax, VA 22037
Office: (703) 846-2793

Steven P. Anastos
ExxonMobil Environmental Services Company
3225 Gallows Road
Fairfax, VA 22037
Office: (703) 846-3393

2. State whether ExxonMobil Oil Company is a current or previous owner of the Property or any portion thereof...

ExxonMobil "Property" ownership dates back to August 16, 1922. At that date, General Petroleum Corporation, a predecessor of Mobil Oil Corporation purchased the property. The "Property" has subsequently been subdivided. According to the "Historical Chain of Title Reports", ExxonMobil's interest in the "Property" ceased in 2001. ExxonMobil as part of the sales agreement does maintain access to the "Property".

3. If at any time during ExxonMobil Oil Company's ownership it rented or leased the Property or any portion thereof ...

ExxonMobil has made appropriate and reasonable efforts to provide responsive information. No information relative to the question was identified.

4. Identify all individuals or entities who owned the Property or any portion thereof prior to ...

10623 FULTON WELLS AVENUE, FORMERLY 10607 NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA

Title to the estate or interest covered by this report appears to be vested in:

SMW PROPERTIES, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

The following is the current property legal description:

All that certain piece or parcel of land being Parcel 1 of Parcel Map Number 26148, according to the map or plat thereof, as filed of record in Book 303, Pages 5 and 6, Los Angeles County, State of California

Assessor's Parcel Number(s): 8009-025-067, formerly a portion of Parcel 8009-025-008

1. HISTORICAL CHAIN OF TITLE

1. GRANT DEED
RECORDED: 08/16/1922
GRANTOR: John Russell Agee and Winifred H. Agee, his wife
GRANTEE: General Petroleum Corporation, a California corporation
INSTRUMENT: Book 1378, Page 75

2. CORPORATION GRANT DEED
RECORDED: 03/23/1988
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 88-394234

3. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487257

4. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Pyramid Oil Company, a California corporation
GRANTEE: Hathaway Company, a California corporation
INSTRUMENT: 01-0487259

5. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487258

6. CORPORATION GRANT DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487260

7. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation successor to Pyramid Oil Company, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487262

8. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487263

9. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487264

10. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: SFS Norwalk LLC, a Delaware limited liability company
GRANTEE: Clark Holdings, LLC, a California limited liability company
INSTRUMENT: 01-0487267

11. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350315

12. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350316

13. GRANT DEED
RECORDED: 08/27/2001
GRANTOR: Clark Holdings, LLC, a California limited liability company
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1590765

14. GRANT DEED
RECORDED: 10/03/2002
GRANTOR: SFS Norwalk LLC, a Delaware limited liability company
GRANTEE: Steven M. Watts and Jayne L. Watts, husband and wife as to 41% interest; William T. Macnider and Mary K. Macnider, husband and wife as to 18% interest and Virginia Macnider Miller, as Trustee of the Macnider Family Trust as to 41% interest
INSTRUMENT: 02-2327868

15. QUIT CLAIM DEED
RECORDED: 01/17/2003
GRANTOR: Steven M. Watts and Jayne L. Watts, husband and wife as to 41% interest; William T. Macnider and Mary K. Macnider, husband and wife as to 18% interest and Virginia Macnider Miller, as Trustee of the Macnider Family Trust as to 41% interest
GRANTEE: SMW Properties, LLC, a California limited liability company
INSTRUMENT: 03-0162464

10628 FULTON WELLS AVENUE, FORMERLY 10607 NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA

Title to the estate or interest covered by this report appears to be vested in:

CLARK HOLDINGS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

The following is the current property legal description:

All that certain piece or parcel of land being Parcel 1 of Parcel Map Number 26843, according to the map or plat thereof, as filed of record in Book 314, Pages 6 and 7, Los Angeles County, State of California

Assessor's Parcel Number(s): 8009-025-069, formerly a portion of Parcel 8009-025-008

1. HISTORICAL CHAIN OF TITLE
1. GRANT DEED
RECORDED: 08/16/1922
GRANTOR: John Russell Agee and Winifred H. Agee, his wife
GRANTEE: General Petroleum Corporation, a California corporation
INSTRUMENT: Book 1378, Page 75

2. CORPORATION GRANT DEED
RECORDED: 03/23/1988
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 88-394234

3. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife

GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487257

4. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Pyramid Oil Company, a California corporation
GRANTEE: Hathaway Company, a California corporation
INSTRUMENT: 01-0487259

5. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487258

6. CORPORATION GRANT DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487260

7. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation successor to Pyramid Oil Company, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487262

8. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487263

9. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487264

10. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: SFS Norwalk LLC, a Delaware limited liability company
GRANTEE: Clark Holdings, LLC, a California limited liability company
INSTRUMENT: 01-0487267

11. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation

GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350315
COMMENTS: This deed was recorded out of order to clear title.

12. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350316
COMMENTS: This deed was recorded out of order to clear title.

10629 NORWALK BOULEVARD, FORMERLY 10607 NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA

Title to the estate or interest covered by this report appears to be vested in:

MICHELLE F. SMITH, TRUSTEE OF THE MICHELLE F. SMITH UDT DATED JULY 24, 2007 AND SUZANNE J. CRAWFORD, TRUSTEE OF THE SUZANNE J. CRAWFORD TRUST DATED OCTOBER 6, 2000 AND WHOLLY AMENDED AND RESTATED ON JULY 29, 2010

The following is the current property legal description:

All that certain piece or parcel of land being Parcel 2 of Parcel Map Number 26843, according to the map or plat thereof, as filed of record in Book 314, Pages 6 and 7, Los Angeles County, State of California

Assessor's Parcel Number(s): 8009-025-070, formerly a portion of Parcel 8009-025-008

1. HISTORICAL CHAIN OF TITLE
1. GRANT DEED
RECORDED: 08/16/1922
GRANTOR: John Russell Agee and Winifred H. Agee, his wife
GRANTEE: General Petroleum Corporation, a California corporation
INSTRUMENT: Book 1378, Page 75

2. CORPORATION GRANT DEED
RECORDED: 03/23/1988
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 88-394234

3. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487257

4. CORPORATION QUIT CLAIM DEED

RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation
GRANTEE: Mobil Foundation Inc., a New York not-for-profit corporation
INSTRUMENT: 01-0487258

5. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Pyramid Oil Company, a California corporation
GRANTEE: Hathaway Company, a California corporation
INSTRUMENT: 01-0487259

6. CORPORATION GRANT DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487260

7. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Hathaway Company, a California corporation successor to Pyramid Oil Company, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487262

8. CORPORATION QUIT CLAIM DEED
RECORDED: 03/26/2001
GRANTOR: Mobil Oil Corporation successor to General Petroleum Corporation, a California corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487263

9. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: John B. Agee a.k.a. John Blackburn Agee and Sally Agee, husband and wife
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-0487264

10. GRANT DEED
RECORDED: 03/26/2001
GRANTOR: SFS Norwalk LLC, a Delaware limited liability company
GRANTEE: Clark Holdings, LLC, a California limited liability company
INSTRUMENT: 01-0487267

11. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350315
COMMENTS: This deed was recorded out of order to clear title.

12. QUIT CLAIM DEED
RECORDED: 07/30/2001
GRANTOR: Mobil Foundation Inc., a New York not-for-profit corporation
GRANTEE: SFS Norwalk LLC, a Delaware limited liability company
INSTRUMENT: 01-1350316
COMMENTS: This deed was recorded out of order to clear title.

13. GRANT DEED
RECORDED: 02/25/2003
GRANTOR: Clark Holdings, LLC, a California limited liability company
GRANTEE: Pristine Properties, a California general partnership
INSTRUMENT: 03-0537175

14. QUIT CLAIM DEED
RECORDED: 11/15/2007
GRANTOR: Pristine Properties, a California general partnership
GRANTEE: Michelle F. Smith, a single woman as to an undivided 50% interest and Suzanne J. Crawford, a single woman as to an undivided 50% interest
INSTRUMENT: 20072553623

15. TRUST TRANSFER DEED
RECORDED: 03/11/2008
GRANTOR: Michelle F. Smith, a single woman
GRANTEE: Michelle F. Smith, Trustee of the Michelle F. Smith UDT dated July 24, 2007
INSTRUMENT: 20080412613

16. TRUST TRANSFER DEED
RECORDED: 09/29/2010
GRANTOR: Suzanne J. Crawford, a single woman
GRANTEE: Suzanne J. Crawford, Trustee of the Suzanne J. Crawford dated October 6, 2000 and wholly amended and restated on July 29, 2010
INSTRUMENT: 2010138518

5. EPA information indicates that, on March 23, 1988, Mobil Oil Corp. transferred title of the Property to Mobil Foundation Inc. ...

See attached copy of Corporation Grant Deed of Gift effective March 15, 1988.

6. EPA information indicates that Mobil Foundation, Inc. merged out of existence on December 7, 2001. ...

See attached Certification of Merger dated December 12, 2001.

7. For the entire period that you owned and/or operated at the Property or any portion thereof, identify and explain ...

ExxonMobil objects to this question as overly broad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA. ExxonMobil has made appropriate and reasonable efforts to provide responsive information.

Aerial photographs dating to 1928 and historical topographic maps dating to 1902 were reviewed. Oil production operations are evident in and around Santa Fe Springs in the 1925 topographic map and in the 1928 aerial photograph. Oil operations continue to be evident in and around the Santa Fe Springs area through at least 1981.

For the subject "Property", aerial photos indicate the presence of oil production operations from 1928 with observable production operations largely removed in the 1968 aerial photograph. Historical topographic maps appear to corroborate evidence seen in the aerial photographs although timing of photos and maps is not identical.

8. Identify all operators at the Property before, during and after your ownership of the Property or any portion ...

ExxonMobil objects to this question as overly broad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA. ExxonMobil has made appropriate and reasonable efforts to provide responsive information.

Response #4 above provides a listing of all property transactions related to the subject "Property".

9. At the time of the transfer of the Property from Mobil Oil Corp., describe the environmental condition ...

See attached "Response to CRWQCB-LAR Directive Letter" (1155 R01.pdf on accompanying CD) prepared by ERI and dated July 30, 2010 which describes current and historical "Property" environmental conditions.

10. Provide a scaled map of the property, which includes the locations of significant buildings and features. ...

Letter report described in the response # 9 provides site maps. Historical aerial photos are also provided for review.

11. Have you ever used, manufactured, produced, or generated and hazardous substances, materials or waste in the operations ...

ExxonMobil objects to this question as overly broad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA. ExxonMobil has made appropriate and reasonable efforts to provide responsive information. No information relative to the question was identified.

To the best of our knowledge, under the ownership of ExxonMobil, the "Property" was used for oil production purposes. None of the additional requested items were located.

12. Provide copies of all hazardous material business plans and chemical inventory forms (originals and updates) submitted to city ...

ExxonMobil has made appropriate and reasonable efforts to provide responsive information. No information relative to the question was identified.

13. Provide copies of any and all documents evidencing your environmental practices at the Property, including, but not limited to, ...

ExxonMobil has made appropriate and reasonable efforts to provide responsive information. No information relative to the question was identified.

Data from the California Geotracker system including reports generated by consultants on behalf of ExxonMobil and response letters from local agencies are included on the CD that is part of this submittal.

14. Provide copies of all technical or analytical environmental information, including, but not limited to, ...

Reports generated by consultants on behalf of ExxonMobil, agency response letters and other environmental information are included on the CD that is part of this submittal.

15. Provide copies of all information and documentation related to approval of any remediation or cleanup activities conducted ...

Reports generated by consultants on behalf of ExxonMobil, agency response letters and other environmental information are included on the CD that is part of this submittal.

16. At the time ExxonMobil Oil Corporation first took possession of the Property, and for each subsequent transfer that resulted ...

Ownership of the "Property" by ExxonMobil dates back to 1922 as indicated in question #4. The environmental condition of the "Property" prior to ExxonMobil's ownership period is unknown. An aerial photograph dated 1928 indicates that properties to the south and west of the subject "Property" appear to be agricultural in nature. Properties east and north of the subject "Property" appear as oil producing and storage. The response to question #9 provides information related to known environmental impacts on the "Property".

17. Information obtained by EPA suggests that ExxonMobil Oil Corporation may have solicited the preparation of a draft subsurface soil investigation from Levine Fricke ...

ExonMobil has provided the Levine Fricke data.

18. Provide a list of employees who had knowledge of the use and disposal of hazardous substances at the Property ...

ExxonMobil objects to this question as overly broad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA. ExxonMobil has made appropriate and reasonable efforts to provide responsive information. No information relative to the question was identified.

CLOSING STATEMENT

Notwithstanding the foregoing, if EPA has a specific relevant question about a particular issue relevant to the "Property" and has a reasonable need for such information in connection with the Site, we will conduct an additional and more targeted search provided that we are given

adequate time to do so. Please address further correspondence to our counsel, Mark Zuschek whose address and telephone are included in response number 1.

Very truly yours,

Steven P. Anastos, PG
Project Manager
ExxonMobil Environmental Services Company

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

MOBIL FOUNDATION, INC.
150 EAST 42ND STREET
NEW YORK, NEW YORK
10017-5666

MAIL TAX STATEMENTS TO

MOBIL FOUNDATION, INC.
150 EAST 42ND STREET
NEW YORK, NEW YORK
10017-5666

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Corporation Grant Deed OF GIFT

TO 1021 CA (18-74) THIS FORM FURNISHED BY TICOR TITLE INSURERS A.P.N.

The undersigned grantor(s) declare(s):
Documentary transfer tax is $_____.
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: ( ) City of _____, and
FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Mobil Oil Corporation, a New York Corporation, successor in interest to General Petroleum Corporation of California, and Socony Mobil Oil Company, Inc., a New York Corporation
a corporation organized under the laws of the State of New York hereby GRANTS to Mobil Foundation Inc. a New York not-for-profit corporation, in order to support the grantee and to further the purposes for which the grantee was established the following described real property in the City of Santa Fe Springs
County of Los Angeles, State of California:

Described in Attachment "A", consisting of 1 Page, attached hereto and forming a part hereof.

In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its VICE President and SR. ASST. Secretary thereunto duly authorized.
Dated: MAR 15 1988

MOBIL OIL CORPORATION, a Corporation

By W. A. BORK
W. A. BORK, VICE President

Attest By W. T. OATES, JR.
W. T. OATES, JR., SR. ASST. Secretary

MOBIL OIL CORP. SEAL 1882

STATE OF NEW YORK
COUNTY OF NEW YORK } SS.
On MAR 15 1988 before me, the undersigned, a Notary Public in and for said State, personally appeared W. A. BORK known to me to be the VICE President, and W. T. OATES, JR. known to me to be SR. ASST. Secretary of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature JOSEPH M. GRAEFIELD

JOSEPH M. GRAEFIELD
Notary Public, State of New York
No. 41-4741160
Qualified in Queens County
Certificate Filed in New York County
Term Expires May 31, 1989

NOTARY SEAL

(This area for official notarial seal)

Title Order No. _____ Escrow or Loan No. _____

MAIL TAX STATEMENTS AS DIRECTED ABOVE

At a Special Meeting of the Board of Directors of MOBIL OIL CORPORATION, held at 150 East 42nd Street, New York, New York on January 30, 1986, at which meeting a quorum was present and assented to its passage, the following Resolution was adopted:

> RESOLVED, that, effective February 1, 1986, the Chairman of the Board, the President or any Vice President of this Corporation be and each of them hereby is authorized to execute, acknowledge and deliver any and all instruments in the name and on behalf of this Corporation, including, without limiting the generality of the foregoing, deeds conveying real estate, with the same force and effect as if specific authority were granted by this Board in each particular instance, the authority hereby granted to be exercised by the respective persons from time to time duly elected or appointed to the aforesaid positions; and the Secretary or a Senior Assistant Secretary or an Assistant Secretary is hereby authorized to attest the execution of such instruments and to affix the Corporate Seal thereto.

I, W. T. OATES, JR., Senior Assistant Secretary of MOBIL OIL CORPORATION, do hereby certify that the foregoing is a true copy from the records of the said MOBIL OIL CORPORATION and that said resolution is now in full force and effect.

IN TESTIMONY WHEREOF, I have signed my name and affixed the Corporate Seal at New York, New York, this 15th day of March, 1988

Senior Assistant Secretary

MOC P/A 1813

04.20.00 01:32 AM *MOBIL BKSFLD, CA P05

EXHIBIT "A"

Township 3 South, Range 11 West, San Bernardino Meridian, Los Angeles County, CA.

Section 6: The South Half (S½) of the North Half (N½) of the Northeast Quarter (NE¼) of the Southwest Quarter (SW¼)

EXCEPTING therefrom, all oil, gas and hydrocarbon substances contained in said land as reserved in that Grant Deed from John Russell Agee and Winifred H. Agee, his wife, to General Petroleum Corporation, dated July 31, 1922, and recorded August 16, 1922, in Book 1378, Page 75 of the Official Records of said County;

FURTHER EXCEPTING therefrom, that parcel of land as conveyed in that Grant Deed from General Petroleum Corporation to Ernest R. Karns and Ruth M. Karns, husband and wife, dated June 5, 1950, to wit:

> Beginning at the Northeast corner of said South Half of the North Half of the Northeast Quarter of the Southwest Quarter of Section 6; thence Westerly along the northerly line of said South Half of the North Half of the Northeast Quarter of the Southwest Quarter, 380.0 feet; thence Southerly and parallel to the Easterly line of said South Half of the North Half of the Northeast Quarter of the Southwest Quarter, 100.85 feet; thence Easterly and parallel to the Northerly line of said South Half of the North Half of the Northeast Quarter of the Southwest Quarter, 380.0 feet; thence Northerly along the Easterly line of said South Half of the North Half of the Northeast Quarter of the Southwest Quarter, 100.85 feet to the point of beginning.

Subject to easements, restrictions, reservations, rights of way and other matters of record.

04. 20. 00 01:32 AM *MOBIL BKSFLD, CA P03

State of New York } ss:
Department of State }

I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.

Witness my hand and seal of the Department of State on DEC 12 2001

Special Deputy Secretary of State

DOS-1266 (7/00)

F01120700056 9

CERTIFICATE OF MERGER

of

MOBIL FOUNDATION, INC.

and

EXXONMOBIL FOUNDATION

into

EXXONMOBIL FOUNDATION

Under Section 906 of the New York Not-for-Profit Corporation Law

MOBIL FOUNDATION, INC., organized under the New York Not-for-Profit Corporation Law (the "Merging Corporation"), and EXXONMOBIL FOUNDATION, organized under the New Jersey Nonprofit Corporation Act (the "Surviving Corporation"), in order to effect a merger (the "Merger") of the Merging Corporation with and into the Surviving Corporation pursuant to Section 906 of the New York Not-for-Profit Corporation Law (the "NY-NPCL"), do hereby certify as follows:

FIRST: Pursuant to Sections 902 and 903 of the NY-NPCL, the directors and members of the Merging Corporation and the trustees and members of the Surviving Corporation have duly adopted a plan of merger setting forth the terms and conditions of the Merger (the "Plan of Merger").

SECOND: The names of the entities proposing to merge are MOBIL FOUNDATION, INC., the Merging Corporation, and EXXONMOBIL FOUNDATION, the Surviving Corporation. The Merging Corporation was organized under the laws of the State of New York on April 28, 1965, and its name has remained unchanged since said date. The Surviving Corporation was organized under the laws of the State of New Jersey on October 3, 1955 under the name ESSO EDUCATION FOUNDATION, which name was changed to EXXON EDUCATION FOUNDATION by an amendment to the Certificate of Incorporation dated December 19, 1972, which name was further changed to EXXONMOBIL FOUNDATION by an amendment to the Certificate of Incorporation dated December 1, 1999.

THIRD: The members of the Merging Corporation are all of the members of the board of directors of EXXON MOBIL CORPORATION. The members of the Surviving Corporation are all of the members of the board of directors of EXXON MOBIL CORPORATION. Accordingly, upon election of an individual as a director of EXXON MOBIL CORPORATION, such individual becomes a member of both the Merging Corporation and the Surviving Corporation. At the Effective Time of the merger, all of the memberships in the Merging Corporation shall be transferred to and become memberships in the Surviving Corporation.

FOURTH: No application by the Surviving Corporation for the authority to conduct activities in the State of New York has been filed with the Department of State, and the Surviving Corporation will not conduct activities in the State of New York until such an application for authority shall have been filed with and accepted by such Department.

FIFTH: The Surviving Corporation agrees to be served with process in the State of New York after the Effective Time in any action or special proceeding for enforcement of any liability or obligation of the Merging Corporation previously amenable to suit in the State of New York, and agrees that it may be sued in the State of New York in respect of any property transferred or conveyed to it as provided in paragraph (c) of section 907 of the NY-NPCL, or the use made of such property, or any transaction in connection therewith.

SIXTH: The Surviving Corporation irrevocably designates the Secretary of State of the State of New York as its agent upon whom process may be served in any action or special proceeding described in Paragraph Fifth herein, and the Secretary of State of the State of New York is authorized to mail a copy of the process in such proceeding to ExxonMobil Foundation, 5959 Las Colinas Boulevard, Irving, TX 75039.

SEVENTH: No amendments or changes to the certificate of incorporation or by-laws of the Surviving Corporation shall be effected as a result of the Merger.

EIGHTH: The Merger was authorized with respect to the Merging Corporation in the following manner: The Plan of Merger was adopted by the board of directors of the Merging Corporation, acting by a written resolution in lieu of a meeting dated May 14, 2001, and signed by all of the directors in accordance with Sections 708(b) and 902 of the NY-NPCL. Said resolution and all of the directors' consents were filed with the minutes of the proceedings of board. The board of directors of the Merging Corporation, in accordance with Section 903 of the NY-NPCL, submitted the Plan of Merger for approval by the members of the Merging Corporation at a special meeting of members held on May 30, 2001. Notice of said special meeting was given to each member of the Merging Corporation, and the Plan of Merger accompanied said notice. At said special meeting, 17 members, representing all of the members of the Merging Corporation, were present and entitled to vote on the Plan of Merger, 17 of such members voted for said Plan and no members voted against it.

NINTH: The Merger is permitted by the laws of the State of New Jersey, the jurisdiction of the Surviving Corporation, and is in compliance therewith. The Plan of Merger was approved and adopted by the trustees of the Surviving Corporation , acting by a written consent to action in lieu of a meeting dated May 14, 2001, and signed by all of the trustees in accordance with Section 15A:10-1 and 15A:10-4 of the New Jersey Nonprofit Corporation Act ("NJ-NCA"). The board of trustees of the Surviving Corporation, in accordance with Section 15A:10-4 of the NJ-NCA, submitted the Plan of Merger for approval by the members of the Surviving Corporation at the annual meeting held on May 30, 2001. At said annual meeting, 17 members, representing all of the members of the Surviving Corporation, were present and entitled to vote on the Plan of Merger, 17 of such members voted for said Plan of and no members voted against it.

TENTH: The effective date of the Merger shall be December 10, 2001, or such later date as the Department of State of the State of New York shall file this Certificate of Merger (the "Effective Time").

ELEVENTH: The Plan of Merger is on file at the place of business of the Surviving Corporation, the address of which is 5959 Las Colinas Boulevard, Irving, Texas 75039-2293. A copy of the Plan of Merger will be furnished by the Surviving Corporation without cost to any member of the Surviving Corporation or of the Merging Corporation, on request.

IN WITNESS WHEREOF, the undersigned have caused their respective duly authorized officers to execute this Certificate on this 6th day of November, 2001.

EXXONMOBIL FOUNDATION

By: E.F. Ahnert
Edward F. Ahnert
President

Attest: Richard M. Cureton
Richard M. Cureton
Secretary/~~Ass't. Secretary~~

MOBIL FOUNDATION, INC.

By: E.F. Ahnert
Edward F. Ahnert
President

Attest: Richard M. Cureton
Richard M. Cureton
Secretary/~~Ass't. Secretary~~

STATE OF TEXAS)
: ss.
COUNTY OF DALLAS)

Before me, Janice M. Phillips, a Notary Public in and for the State of Texas, on this day personally appeared Edward F. Ahnert, known to me to be the person whose name is subscribed to the foregoing instrument, and known to me to be the President of Mobil Foundation, Inc., a New York not-for-profit corporation, and acknowledged to me that he executed said instrument for the purposes and consideration therein expressed, and as the authorized act of said corporation. Given under my hand and seal of office this 6th day of November, 2001.

JANICE M. PHILLIPS
MY COMMISSION EXPIRES
May 18, 2002

Janice M. Phillips
Notary Public
Commission expires: 5-18-02

STATE OF TEXAS)
: ss.
COUNTY OF DALLAS)

Before me, Janice M. Phillips, a Notary Public in and for the State of Texas, on this day personally appeared Edward F. Ahnert, known to me to be the person whose name is subscribed to the foregoing instrument, and known to me to be the President of EXXONMOBIL FOUNDATION, a New Jersey nonprofit corporation, and acknowledged to me that he executed said instrument for the purposes and consideration therein expressed, and as the authorized act of said corporation. Given under my hand and seal of office this 6th day of November, 2001.

JANICE M. PHILLIPS
MY COMMISSION EXPIRES
May 18, 2002

Janice M. Phillips
Notary Public
Commission expires: 5-18-02

At a Term, Part I, of the
Supreme Court of the State
of New York, held in and
for the County of Albany, at
16 Eagle Street, in the City of
Albany, on the 30th day of
November, 2001.

Present: Hon. Joseph C. Teresi, Justice.

In the Matter of the Application of
Mobil Foundation, Inc. and
ExxonMobil Foundation for an
order approving their plan of merger
under Section 907 of the Not-for-Profit
Corporation Law into ExxonMobil
Foundation and authorizing the filing of
the Certificate of Merger under Section
906 of said law.

ORDER APPROVING MERGER
& AUTHORIZING FILING OF
CERTIFICATE OF MERGER

Index No. 6617-01

Mobil Foundation, Inc. and ExxonMobil Foundation, having duly made joint application for an order pursuant to Section 907 of the Not-for-Profit Corporation Law approving the plan of merger of said corporations and authorizing the filing of a certificate of merger in accordance with Section 906 of the Not-for-Profit Corporation Law, and said application having regularly come on to be heard,

Now, upon reading the order to show cause dated November 9, 2001, the affidavit of Edward F. Ahnert, in his dual capacities as President of Mobil Foundation, Inc. and President of ExxonMobil Foundation, sworn to on November 6, 2001, and the plan of merger designated Exhibit A therein, and the certificate of merger of said corporations into ExxonMobil Corporation under Section 906 of the Not-for-Profit Corporation Law, all in

J. KEITH NOLAN, P.C.
ATTORNEY AT LAW
346 MAIN STREET
LAKEVILLE, CT 06039-0687
TEL. (860) 435-2567

support of said application, and after hearing J. Keith Nolan, Esq., for the applicants in support of the application, and Timothy B. Lennon, Esq., Assistant Attorney General, who advised that the Attorney General does not oppose this application, and after due deliberation having been held thereon, and it appearing that the interests the constituent corporations and the public interest will not adversely be affected by the proposed merger;

Now, upon motion of J. Keith Nolan, Esq., attorney for the applicants, it is:

ORDERED, that the plan of merger of Mobil Foundation, Inc. with and into ExxonMobil Foundation, designated Exhibit A herein, be and the same hereby is approved, and it is further

ORDERED, that the aforesaid certificate of merger is authorized to be filed with the Department of State in accordance with Section 906 of the Not-for-Profit Corporation Law, to which certificate a certified copy of this order shall be annexed, and it is further

ORDERED, that the aforesaid certificate of merger may be amended to contain a later effective date, if the same is necessary for filing with the Department of State, and said amended certificate is authorized to be filed with said department, to which a certified copy of this order shall be annexed.

Enter,

12/5/01
at Albany N.Y.

Joseph C. Teresi, J.S.C.

2001 DEC -7 P1:12:12
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6

J. KEITH NOLAN, P.C.
ATTORNEY AT LAW
346 MAIN STREET
LAKEVILLE, CT 06039-0687
TEL. (860) 435-2567

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SAME DAY SERVICE REQUESTED

CERTIFICATE OF MERGER
OF
MOBIL FOUNDATION, INC.
AND
EXXONMOBIL FOUNDATION
INTO
EXXONMOBIL FOUNDATION

Under Section 906 of the New York
Not-For-Profit Corporation Law

STATE OF NEW YORK
DEPARTMENT OF STATE
FILED DEC 07 2001
TAX $ —
BY: 24

Filing receipt to be returned to:

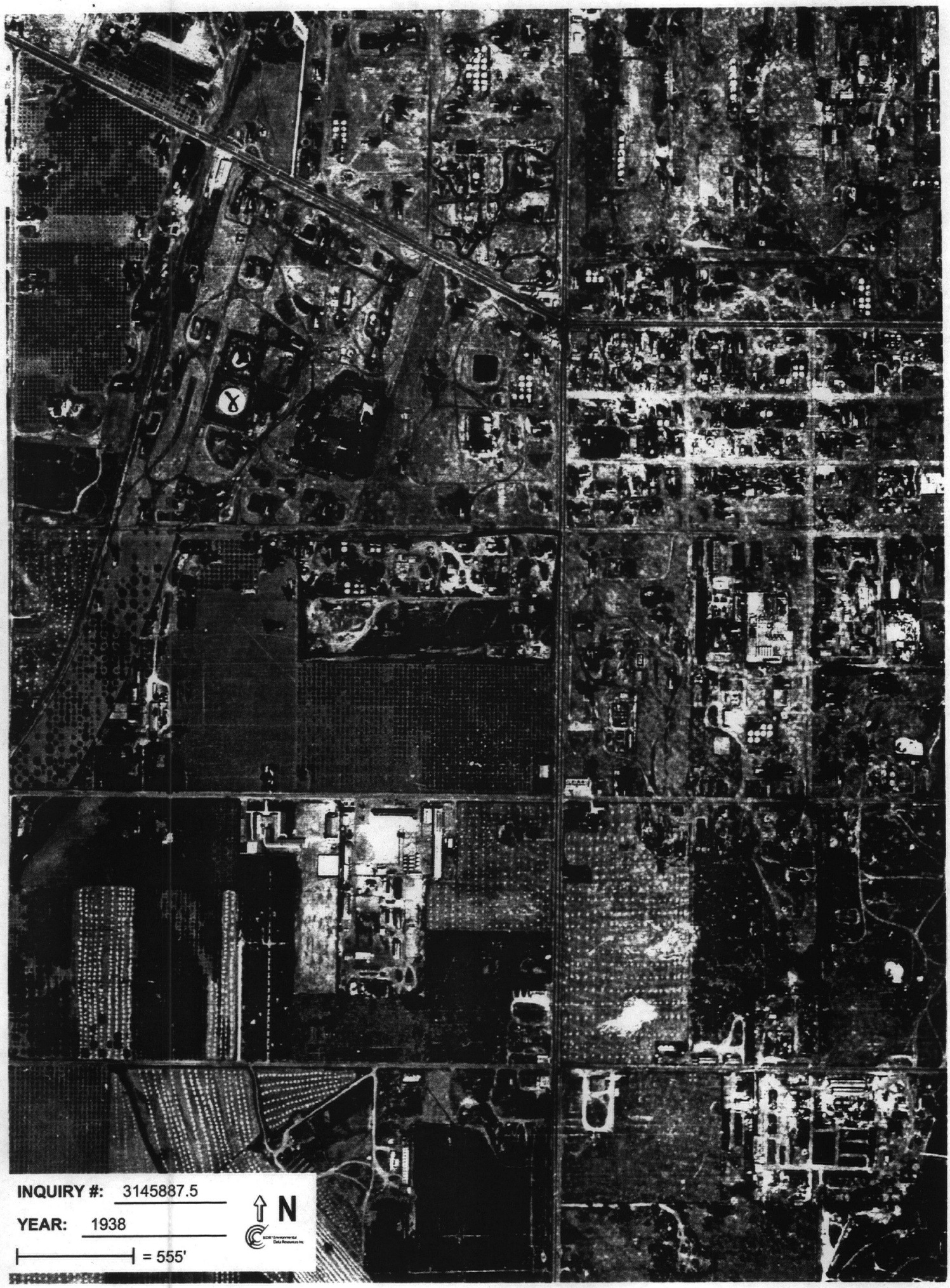
J. Keith Nolan, P. C.
346 Main Street
P. O. Box 637
Lakeville, Connecticut 06039

J. KEITH NOLAN, P.C.
ATTORNEY AT LAW
346 MAIN STREET
LAKEVILLE, CT 06039-0687
TEL. (860) 435-2567

7

01120700064

INQUIRY #: 3145887.5
YEAR: 1928
= 500'
N


INQUIRY #: 3145887.5
YEAR: 1938
= 555'
N

INQUIRY #: 3145887.5
YEAR: 1947
= 666'
N

INQUIRY #: 3145887.5
YEAR: 1956
= 400'
N

INQUIRY #: 3145887.5

YEAR: 1968

= 480'

N

INQUIRY #: 3145887.5

YEAR: 1977

= 666'

N

EDR® Environmental Data Resources Inc

CLARK
FLORENCE
INQUIRY #: 3145887.5
YEAR: 1989
= 666'
N

INQUIRY #: 3145887.5
YEAR: 1994
= 604'
N

INQUIRY #: 3145887.5
YEAR: 2002
= 666'
N

CREEK
INQUIRY #: 3145887.5
YEAR: 2005
= 604'
N

McLaren Hart®

ENVIRONMENTAL ENGINEERING CORPORATION

Steve,
FY review. Please advise on recommendation ~ pg 4
thanks
Manny
10/5/96

September 27, 1996

Mr. Manny Galaviz
Mobil Exploration and Producing U.S., Inc.
10000 Ming Avenue
Bakersfield, California 93311

RE: ADDENDUM TO PHASE I REPORT (DATED SEPTEMBER 6, 1996) PREPARED FOR THE JALK FEE PROPERTY LOCATED AT 10607 NORWALK BOULEVARD, SANTA FE SPRINGS, CALIFORNIA (03.0601081.001.001)

Dear Mr. Galaviz:

On September 11, 1996, McLaren/Hart conducted a review of agency files at the Los Angeles County Department of Public Health (LACDPH) for the subject Property identified above as well as for the Continental Heat Treating, Inc. (CHT) site located at 10643 Norwalk Boulevard. Two previous attempts (July 18 and September 13, 1995) to review the above referenced files were unsuccessful due to the LACDPH indicating no files existed. The following is a list by property of the items reviewed at the LACDPH. Photocopies of the files are provided as Attachments A and B to this letter.

Jalk Fee Property located at 10607 Norwalk Boulevard:

- *Draft Subsurface Soil Investigation report for Jalk Fee property* prepared by Levine-Fricke, dated December 6, 1991 (copy not included).

- Letter dated September 23, 1993, from McLaren/Hart to Mobil Exploration and Producing U.S., Inc. (Mobil) regarding McLaren/Hart's review of the Jalk Fee property Site Characterization Report prepared by Levine/Fricke.

G:\M\MOBIL\0601081\PHASEI.ADD

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recycled paper

- Letter dated September 30, 1993, from Mobil to the Santa Fe Springs Fire Department, regarding soil contamination identified on the Jalk Fee property.

- Los Angeles County Fire Department (LACFD) internal memo dated November 5, 1993, regarding a report sent to them by Mobil. According to the memo, "the report indicates a possible illegal discharge to soil from the PCE metal degreaser" located on the CHT property. The memo further states that this possible release warrants an inspection.

- Letter dated October 7, 1994, from Mobil to the Department of Toxic Substances Control (DTSC) regarding clarification of agency oversight at the Jalk Fee property.

- *Limited Subsurface Investigation of Tetrachloroethylene (PCE) Impacted Soil at Mobil Jalk Fee Property, Santa Fe Springs*, prepared by McLaren/Hart, dated November 15, 1994 (copy not included).

- Letter dated December 9, 1994, from Mobil to LACFD regarding the submittal of the tetrachloroethylene (PCE) investigation reports for the Jalk Fee property.

Continental Heat Treating, Inc. located at 10643 Norwalk Boulevard:

- Official Notice of Violation No. 042136 from the County of Los Angeles Department of Health Services dated March 16, 1984. CHT was directed to remove oil from the ground in the rear storage area of the property.

- Notice of Violation and Order to Comply dated 1989. CHT was directed to discontinue the disposal of "any waste oil onto the ground" and to "remove and legally dispose of the oily surface in the rear asphalted yard". The correction date was listed as May 19, 1989. CHT was also directed to "keep the lids and bungs on and not to overfill the hazardous waste drums" as well as to properly label all hazardous waste drums.

- LACDPH site inspection form dated October 6, 1994. According to the form, CHT was told to provide a corrective action plan for soil contamination by chlorinated hydrocarbon solvents for the area 120' west of the east wall and 30' south of the north wall no later than November 20, 1994.

- General Business Plan for CHT (not dated). The following hazardous materials/wastes were listed for the property:
  - 500-gallon oil tank/ 300-gallons waste oil stored in drums
  - 200-gallon PCE tank/ 300-gallons waste PCE stored in drums
  - 55-gallon drum of acetone
  - 250-gallon ammonia tank

- Material Safety Data Sheets (MSDS). MSDS for the following compounds:
  - anhydrous ammonia
  - perchloroethylene
  - quenching oil 15S
  - 2-propanone

- LACFD Case Synopsis of CHT dated October 19, 1995. The LACFD received a complaint from Mobil alleging CHT was responsible for all or part of the chlorinated VOC contamination on the Jalk Fee property. The complaint was referred to the Enforcement Unit for action on November 4, 1993. No enforcement activity by September 27, 1994, prompted a routine complaint inspection on October 6, 1994.

  The long-time employees at CHT all denied any improper disposal, leaking or spillage of vapor degreasing solvents anywhere on the property. Although the vapor degreaser had been moved from its original location within the shop, it appeared that the "old location was close enough to the northern property line that leaks, sloppy operations or spills could have migrated offsite". This inspection resulted in NOV #P14042, which included an order to provide a corrective action plan for the old vapor degreaser area.

  Three soil samples were taken from one boring immediately adjacent but exterior to the concrete sump of the old industrial vapor degreaser as part of a preliminary assessment. The results of the samples are summarized in the following table:

Boring Number	Depth (Feet)	Trichloroethylene (TCE) $\mu g/kg$	Tetrachloroethylene (PCE) $\mu g/kg$
B-1	0.5	4759	7514
B-1	5	21	290
B-1	10	66	1855

The LACFD felt these results were sufficient documentation of a significant release and warranted a remedial investigation of this area. A letter was sent to Mr. Stull (the owner of CHT) on July 5, 1995, requiring him to determine the extent of the contamination and to submit a site mitigation workplan. The LACFD received a workplan prepared by Green Environmental on October 11, 1995; the LACFD did not feel the workplan was adequate. There was no further information regarding what actions have been taken at the site.

According to a separate page, the CHT case was referred to the Solid Waste Management Unit (SMU) for oversight on June 29, 1995. The case number under SMU is #377.

- LACFD caseworker notes dated 1989-1995. In July 1989, four drums of oil and absorbent were removed from the rear storage yard. According to the caseworker, the "facility has a continuing problem with mineral oil drag out on the asphalted area". According to a note made on October 25, 1995, SMU was still providing oversight for the hazardous material release at the site.

Based on the information McLaren/Hart reviewed at the LACDPH, there has been a documented release of chlorinated solvents at the CHT site within the vicinity of the PCE contamination discovered on the Jalk Fee property. According to the files, the LACFD SMU Division is handling the oversight of this hazardous materials release. McLaren/Hart recommends contacting the SMU Division to determine the current status of the CHT site and whether the vertical and horizontal extent of the contamination on the CHT site has been identified.

Sincerely,

Tabb W. Bubier
Supervising Geoscientist

Everett Ferguson Jr.
Associate Geoscientist

Attachments

G:\M\MOBIL\0601081\PHASE1.ADD

Attachment A

Jalk Fee

McLaren Hart®

ENVIRONMENTAL ENGINEERING CORPORATION

August 8, 1996

Los Angeles County Health Services
Public Health Investigation
5555 Ferguson Drive, Suite 120-04
Commerce, CA 90022

Attention: Haz-Mat Liaison

REQUEST FOR PUBLIC INFORMATION

This letter is a request for public information regarding the following properties under the Freedom of Information Act. I would like to know if you have any current and/or historical records regarding hazardous material use/storage/releases and/or USTs on file for the specified addresses.

810643

H-1077-96

- Mobil ~~Jalk Fee~~ Property
  10607 Norwalk Blvd.
  Santa Fe Springs, CA 90670

- Continental Heat Treating, Inc.
  10643 Norwalk Blvd.
  Santa Fe Springs, CA 90670

If you have any questions regarding this request, please contact me at (714) 752-3268.

Sincerely,

Kristina Ikemori

Kristina Ikemori
Associate Environmental Scientist

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recycled paper

HAZ MAT

Los Angeles County
Fire Department
Prevention Bureau

Hazardous Waste
Control Program

Log # [yynnnn]: 933143-117

Received by: LR Date: 11/4/93

Log entry by: LR Date: 11/4/93

- [ ] Emergency Response
- [x] Illegal Disposal Onsite
- [ ] Illegal Disposal Offsite
- [ ] Illegal Storage
- [ ] Clean-up
- [ ] Public Health License

Name: Continental Heat Treating Phone:

Address: 10643 Norwalk City: Santa Fe Springs

Substance: Solvents Zip: 90670

Scope: Attached Report indicates possible illegal discharge into subsurface. Spent PCB metal degreaser. Warrants Inspection.

Status:

Section Assign To: SGV SFV SSE SE C M ER ENF SM Date:

Inspector Assign To: GB Assign By: [illegible] Date: 11-5-93

Service Requested By: LR

Address: Phone:

Request For Service

Los Angeles County
Fire Department
Prevention Bureau

Hazardous Waste
Control Program

[illegible]n]: 933143-117

Received by: LR Date: 11/4/93

Entry by: LR Date: 11/4/93

- [ ] Emergency Response
- [x] Illegal Disposal Onsite
- [ ] Illegal Disposal Offsite
- [ ] Illegal Storage
- [ ] Clean-up
- [ ] Public Health License

Name: Continental Heat Treating Phone:

Address: 10643 Norwalk City: Santa Fe Springs

Solvents Zip: 90670

Scope: Attached Report indicates possible illegal discharge into subsurface from PCE metal degreaser. Warrants Inspection.

Status:

Section Assign To: SGV SFV SSE SB C M ER ENF SM Date:

Inspector Assign To: GB Assign By: JV Date: 11-5-93

Service Requested By: LR

Address: Phone:

You have a Call

(mg)

County of Los Angeles - Fire Department

Prevention Bureau

Hazardous Waste Control Program

Facsimile Transmittal Sheet

To: TOM WALKER

MOBIL OIL

Phone (310) 903 2725 FAX: (310) 903-2731

Date/Time: 17 0845 NOV 93

From: GEORGE F. BAKER

Hazardous Waste Control Program
7300 E. Alondra Blvd.
Paramount, Calif. 90732

Phone: (310) 790-1810 FAX: (310) 790-8002

Total number of PAGES, including this cover sheet 9

Comments: AS INDICATED

SITE MIT Guidance for

work plans

Mobil Exploration & Producing U.S. Inc.

10735 SOUTH SHOEMAKER AVENUE
SANTA FE SPRINGS, CALIFORNIA 90670

September 30, 1993

Santa Fe Springs Fire Department
Environmental Protection Division
11300 South Greenstone Avenue
Santa Fe Springs, CA 90670

Dear Sir or Madam:

Mobil Oil Corporation ("Mobil") has learned that soil contamination exists at 10607 Norwalk Boulevard, Santa Fe Springs, California, a property owned by Mobil's affiliate, Mobil Foundation, Inc. (the "property").

Specifically, tests conducted by Mobil's environmental consultant demonstrate the presence of several contaminants in the soil, the primary ones of which are perchloroethylene, trichloroethylene and 1,2 dichloroethylene. Mobil believes that the primary contamination originates from an off-site source, Continental Heat Treating, Inc.

The enclosed letter by Mobil's environmental consultant summarizes the test results which Mobil will forward to you if you request. I may be reached at (310) 903-2725.

Mobil will be contacting the California Regional Water Quality Control Board on behalf of Mobil Foundation, Inc. to discuss further testing and cleanup of the property.

Very truly yours,

Thomas Walker

Tom Walker
Environmental Engineer

cc: California Regional Water Quality Control Board, Region 4
Department of Toxic Substances Control
Environmental Protection Agency, Region 9

c:\notarial

Referred to Lance Ralston LACo Health HAZ MAT Site mitigation
10/5/93 DK

McLaren Hart

September 23, 1993

Mr. T. M. Walker, P.E.
Environmental Engineer
Mobil Exploration and Producing U.S. Inc.
10735 South Shoemaker Avenue
Santa Fe Springs, CA 90670

PERCHLORETHYLENE (PCE) AND HEAVY METALS IN SOIL AT THE JALK LEASE

Dear Mr. Walker,

McLaren/Hart has completed our review of the site characterization report prepared by Levine/Fricke ("Draft Subsurface Soil Investigation, Jalk Fee Property, 10607 Norwalk Boulevard, Santa Fe Springs, California"). The report included data showing that the soil contains crude oil, which would be expected in an active oil field. The report also documented that the soil contains lead, which presumably leached from metal pipes in an area known as the "boneyard", and perchloroethylene (PCE), which we believe is a result of operations at the neighboring facility.

This letter briefly explains the significance of the findings which were presented in the Levine and Fricke report and makes recommendations on how Mobil should proceed.

HEAVY METALS

Total lead, mercury, and zinc were detected in the boneyard in the southwest corner of the property at maximum concentrations of 1,750, 34.1, and 10,000 milligrams per kilogram (mg/kg), respectively. These concentrations exceed the Total Threshold Limit Concentration (TTLC) of 1,000, 20, and 5,000 mg/kg. Soluble lead and zinc were also detected at maximum concentrations of 151 and 474 milligrams per liter (mg/l). These concentrations exceed the Soluble Threshold Limit Concentration (STLC) of 5 and 250, respectively. Samples exceeding the TTLC and STLC were found at both the three foot and the eight foot depths. No samples were collected below eight feet.

Although the lead samples were collected from random sample locations, it appears that the lead is confined to the northeast corner of the boneyard, representing approximately one third of the

STAFF\TERRELLB\135.LTB

16755 Von Karman Avenue, Irvine, CA 92714 (714) 756-2667 FAX (714) 756-8460

total surface area of the boneyard, approximately 6,100 square feet. Excavation of this area to a depth of eight feet would result in approximately 1,800 cubic yards of soil.

Since the data show that metal concentrations were increasing between 3 and 8 feet, it is reasonable to assume that the soil below 8 feet may contain metals exceeding the cleanup criteria. We recommend additional sampling below eight feet prior to excavation to define the vertical extent of heavy metals.

PERCHLOROETHYLENE (PCE)

Perchloroethylene and related compounds [trichloroethylene (TCE) and 1,2-dichloroethylene (DCE)] were detected in the soil at the Jalk Fee. These chlorinated compounds are used in such industries as dry cleaning, electronics, aerospace, and metal treating, but are not used in oil production. The maximum concentration of PCE in soil at the Jalk Fee is 2,500,000 parts per billion (ppb). The following sections describe the possible source of PCE at this location.

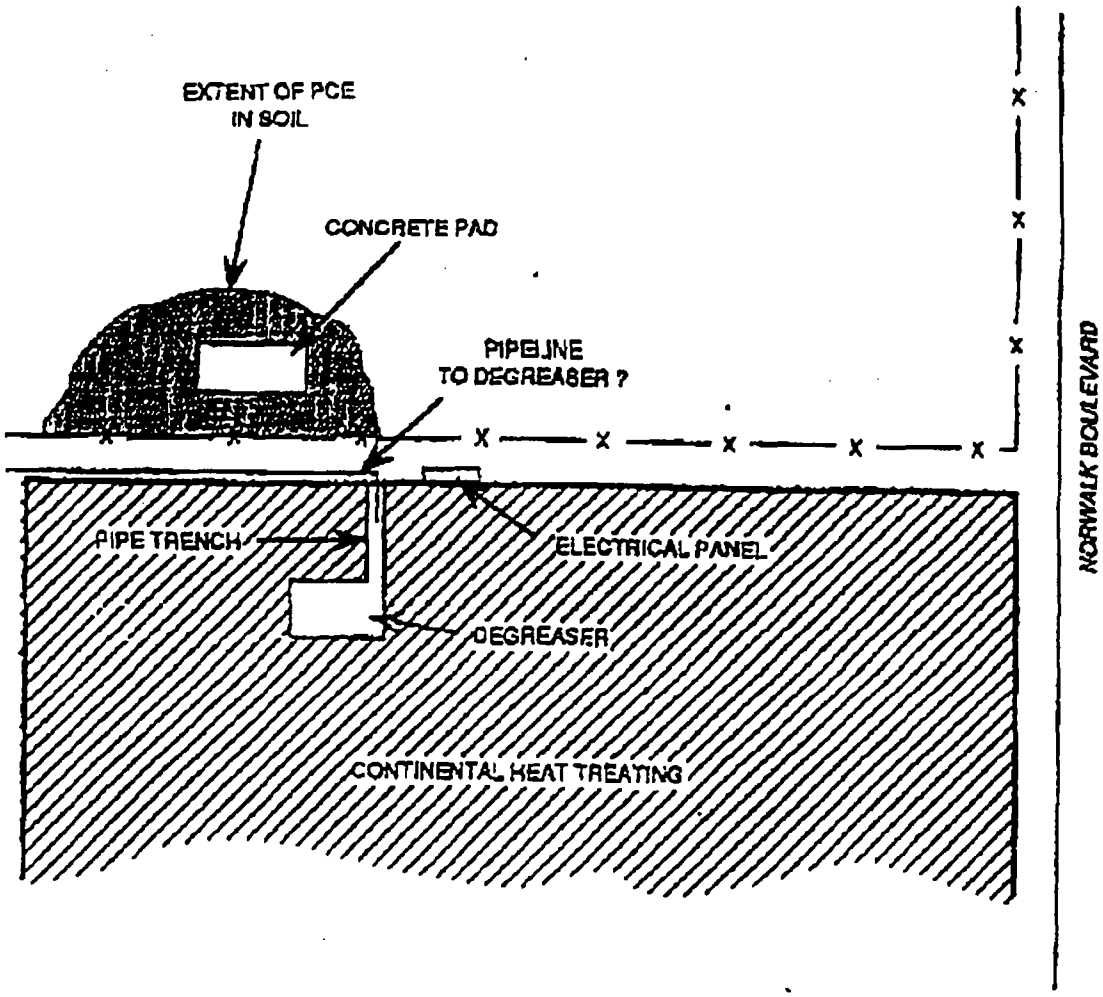
Santa Fe Springs Fire Department Record Review

In an attempt to identify possible sources of the PCE at the Jalk lease, McLaren/Hart reviewed the files at the Environmental Compliance Section of the City of Santa Fe Springs Fire Department. A written request to review the file on Continental Heat Treating was submitted by FAX on Tuesday, May 11, 1993 and the file was reviewed on Wednesday, May 12th. The following is a summary of the information in the file relevant to the PCE on the Jalk lease.

Use of PCE at Continental Heat Treating

The Continental Heat Treating facility was designed in 1968 and began operation in 1969. The facility drawings (Job # 6802, PE-1) dated August 20, 1968 showed a degreaser located approximately 120 feet west of the northeast corner of the building and 30 feet south of the northern wall of the building. A pipe trench was shown going from the degreaser to the north end of the building, just west of the electrical panel. The PCE on the Jalk lease was found in the area beginning exactly where the pipe trench left the building and continuing west to the northwest corner of the building. (See Figure 1)

In a letter to the City of Santa Fe Springs dated March 30, 1987, Continental Heat Treating reported that PCE was "used for cleaning of parts prior to heat treating." The hazardous material registration forms (February 15, 1993) reported an average PCE use of 125 gallons per day and a maximum daily use of 250 gallons per day. The Business Plan described a 500 gallon above ground PCE tank, although the location of this tank could not be determined from the information in the file.



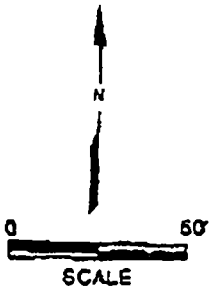


FIGURE 1
DISTRIBUTION OF
PERCHLOROETHYLENE (PCE) ON
JALK LEASE NEAR CONTINENTAL
HEAT TREATING DEGREASER

SD	6-20-93		
DXD			
	5-20-93		89305114

Documented Annual PCE Waste Generation

The hazardous materials registration forms (February 15, 1993) reported that 1.5 tons of PCE are generated each year at the facility. In the March 30, 1987 letter to the City of Santa Fe Springs, Continental Heat Treating reported that the PCE was stored in a tank provided by Acto Kleen Corporation and was disposed by Acto Kleen for recycling.

Hazardous Waste Code Violations

Continental Heat Treating has operated under an Industrial Waste Permit from the Los Angeles County Sanitation District and predecessor agencies since the 1970's. Permit # 4365 was issued on January 27, 1970 and Permit #4827 was issued on November 18, 1976. These permits did not include limits or sampling requirements for PCE.

Various inspections, violations, and complaints over the years were included in the file. These included:

- A Notice was issued on July 11, 1978 from the LA County Engineer ordering Continental Heat Treating to "clean the interceptor by July 18, 1978" and "maintain the interceptor in good operating condition at all times."

- An inspection report of April 5, 1982 noted under "Special Hazards and Conditions" that a degreaser was present in the northeast portion of the building.

- A complaint to the Fire Department was recorded on October 5, 1987 that blue-green water was being discharged to the street. This was attributed to the recent earthquake (October 4, 1987) which had broken several pieces of equipment at the site and that "a discharge similar to that of December 8, 1986 was occurring."

- A Notice of Violation (NOV) was issued on February 23, 1988 for discharging cooling tower blow down water to the street.

- The Santa Fe Springs Fire Department cited Continental Heat Treating on June 14, 1988 for failure to disclose certain materials on the 1987 plot plan.

Possible Explanations

Illegal and accidental discharges of chlorinated solvents to soil are typically not reported and are not discovered until a site characterization is performed. The data from the Levine/Fricke report

showing PCE in the soil, the use of large quantities of PCE on the adjoining site, the location of the PCE in soil relative to the degreaser and pipe trench on the Continental facility, and the complete absence of any use of chlorinated solvents of any kind by Mobil E & P, very strongly points to Continental Heat Treating as the source of the PCE on the Jalk Fee.

The following possible explanations are based on the information we were able to find and on past experience with similar situations. We cannot say which of these explanations is most likely or whether there is another possible explanation for the observed PCE.

Intentional or Unintentional Discharge. One possible explanation is that PCE from the degreaser or from the above ground storage tank was discharged to the ground by an employee or contractor working on site. This could have resulted from any number of activities such as overflow, spillage, a broken pipe, or an intentional discharge of waste PCE.

Fires. Three degreaser fires were reported in the Continental Heat Treating file at the Santa Fe Springs Fire Department:

- Degreaser Tank Fire (Code 6205) 87/10/02;
- Fire in Degreaser (Code 6225) 88/04/09;
- Fire in Degreaser (Code 6229) 88/08/01.

Earthquake. The file made reference to two earthquakes (December 8, 1986 and October 4, 1987) that resulted in broken equipment and discharge of chemicals. Although these references were made to the cooling tower blowdown water, it is also possible that the piping between the degreaser and the PCE storage tank were among the "several pieces of equipment" that were damaged at the same time.

I would be happy to discuss this matter with you at any time. Please call me at (714) 752-3211 if you have any questions or requests for additional information.

Sincerely,

Dennis Dineen

Dennis Dineen
Managing Principal Geoscientist
Assistant Regional Manager, Irvine

STAFF\TERRELL\135.LTR

McLaren Hart sm
ENVIRONMENTAL ENGINEERING CORPORATION

COMPANY / NAME

MOBIL

or attach business card

Address 10607 NORWALK BL

SES

Phone (310) 903-2725

CASE UPDATE \ PHONE LOG

Los Angeles County Fire Department
Hazardous Waste Control Program
Health Haz Mat Division

PHL ? Code 225

DATE:	INITIAL	FINDINGS/REMARKS
11/02/93	GB	- set up file - site mitigation problem from last year
10/6/94	GB	- please req. for sample plan and results to be sent.

Mobil Exploration & Producing U.S. Inc.

Received 10/12/94

10735 SOUTH SHOEMAKER AVENUE
SANTA FE SPRINGS, CALIFORNIA 90670

October 7, 1994

Mr. Miguel Z. Monroy, Dr. Env.
Senior Hazardous Materials Specialist
California Environmental Protection Agency
Department of Health Services Control
Site Mitigation Branch, Region 3
1011 North Grandview Avenue
Glendale, CA 91201

CLARIFICATION OF AGENCY OVERSIGHT - MOBIL JALK FEE
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CA

Dear Mr. Monroy:

This letter is [redacted] oversight of Mobil's Jalk Fee prope[redacted] Springs. [redacted] notified various agencies, including [redacted] Toxic Substances Control (DTSC), the Los Angeles Regional Water Quality Control Board (LA RWQCB) and the City of Santa Fe Springs Fire Department of the presence of lead and perchloroethylene (PCE) in the soil at this property via correspondence date September 30, 1993. The DTSC recommended the submittal of a Preliminary Endangerment Assessment (PEA) covering this property by way of a letter dated October 27, 1993. Mobil responded with a letter dated November 15, 1993 stating that we would work with the DTSC on both the lead and PCE issues.

Subsequently, three ground water monitoring wells were positioned on the Jalk Fee property in preparation for construction of a crude oil bioremediation cell (located in the portion of the property not affected by lead and/or PCE contamination). Analysis of samples taken from one of these wells indicates the presence of PCE in the groundwater under this site. This information has been reported to the LA RWQCB through the quarterly monitoring report required by the LA RWQCB for operation of the crude oil bioremediation cell. Given that the groundwater beneath the site has been impacted, it is our understanding that the LA RWQCB will assume the lead agency oversight role regarding the PCE issue.

We are still working with the DTSC with regards to the lead contamination, as evidenced by our "Letter of Intent" submitted to the DTSC on August 8, 1994. Mobil, through McLaren/Hart (our environmental contractor) will be contacting you in the near future regarding the status of our voluntary cleanup agreement pertaining to lead contamination.

If you have any questions concerning this property, please call me at (310) 903-2725.

Sincerely yours,

T. M. Walker
Senior Environmental Engineer

California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. George Baker
Hazardous Materials Specialist
Health Hazardous Materials Section
Inspection Section
Los Angeles County Fire Department
7300 East Alondra Blvd
Paramount, CA 90723

Mr. Tabb Bubier
Supervising Geoscientist
McLaren/Hart
16755 Von Karman Avenue
Irvine, CA 92714

c:\jalk_clr

Mobil Exploration & Producing U.S. Inc.

10735 SOUTH SHOEMAKER AVENUE
SANTA FE SPRINGS, CALIFORNIA 90670

December 9, 1994

Mr. George Baker
Hazardous Materials Specialist
Health Hazardous Materials Section
Inspection Section
Los Angeles County Fire Department
7300 East Alondra Blvd
Paramount, CA 90723

SUBMITTAL OF TETRACHLOROETHYLENE
(PCE) INVESTIGATION REPORTS FOR
THE MOBIL JALK FEE PROPERTY
10607 NORWALK BOULEVARD
SANTA FE SPRINGS, CALIFORNIA

Dear Mr. Baker:

Enclosed are copies of the Levine Fricke and McLaren/Hart investigation reports for the tetrachloroethylene (PCE) contamination found at our Jalk Fee Property. I believe that these reports include the information you are looking for with regards to sampling protocol and lab results.

I would appreciate any information you could provide as to the status of the site investigation taking place on the Continental Heat Treating Inc. property. I would also like to receive a copy of the final report after the investigation has been completed.

Please let me know if you have any questions pertaining to the attached reports.

Sincerely,

Tom M Walker

T. M. Walker
Senior Environmental Engineer

cc: Mr. Jim Ross
Unit Chief, Site Cleanup Unit
California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Mr. Miguel Z. Monroy, Dr. Env.
Senior Hazardous Materials Specialist
California Environmental Protection Agency
Department of Health Services Control
Site Mitigation Branch, Region 3
1011 North Grandview Avenue
Glendale, CA 91201

Mr. Tabb Bubier
Supervising Geoscientist
McLaren/Hart
16755 Von Karman Avenue
Irvine, CA 92714

c:\pce_025

Prepared by:

McLaren/Hart
16755 Von Karman
Irvine, California 92714-4918

November 15, 1994

LIMITED SUBSURFACE INVESTIGATION OF TETRACHLOROETHYLENE (PCE) IMPACTED SOIL AT MOBIL JALK FEE PROPERTY SANTA FE SPRINGS, CALIFORNIA

Attachment B

Continental Heat Treating Inc.

[redacted]

INSPECTION
FILE

HAZ MAT

Prevention Bureau

Hazardous Waste Control Program

Log # [yynnnn]: 933143-118

Received by: LR Date: 11/4/93

Log entry by: LR Date: 11/4/93

☐ Emergency Response ☐ Illegal Storage

☒ Illegal Disposal Onsite ☐ Clean-up

☐ Illegal Disposal Offsite ☐ Public Health License

Name: Continental Heat Treating Phone:

Address: [redacted] City: Santa Fe Springs

Substance: Solvents Zip: 90670

Scope: Attached Report indicates possible illegal discharge into subsurface from PCE metal degreaser Warrants Inspection.

Status:

Section Assign To: ○ SGV ○ SFV ○ CSE ○ SB ○ C ○ M ○ ER ○ ENF ○ SM Date:

Inspector Assign To: GB Assign By: JV Date: 11-5-93

Service Requested By: LR

Address: Phone:

[illegible]

11/4/93 Referred to enforcement for action

~~10~~ 9/27/94 – no ENF Action – do inspection

10/6/94 – inspection → 25127 plan ordered

see SMU case

DBA	Continental Heat Treating Inc	Interviewed	Dee Grams
Owner	"	Title	Controller
Partner		Start Date	1/69
Address	10643 S Norwalk B.	# of employees	36 50-70 Bestal or Mod
		# of shifts	2 4/4
		Operating Hours	x 5 D

...ank ☐ I ☐ II ☐ III

1	2	3	4

...ons, T = tons; per quarter

EPA#

Storage

Size / For

W C H A R T

→ hauler manifest number & date → disposal method / environmental fate

Revisit / / ☐ Abatement / /

LOS ANGELES COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL SANITATION

MISCELLANEOUS ESTABLISHMENT

District

Sanitarian

Trade Name

Owner John Greenen

Manager

Address

Phone 268-4

Address

Phone

Address

Phone

Type Est. Graphic arts

Health Lic. No. 091790/101

SIC - 3555

Paid

Representative's Signature JAMES ODLING, Date 8/16/89

District Code 13

REASON FOR CANCELLATION OR CHANGE. Use Account Number (s)

OB

ADDITIONAL COLLECTIONS

Additional Fee	
Addition of Partner	
Duplicate License	
Site Transfer	
Total	

CANCEL ENTIRE ACCOUNT (Reason below must be completed and signed)

CHANGE TO

OWNER(S) NAME	
DBA NAME	Para Plate
MAIL ADD	
BUS ADD	
OTHER	Code Fee

...STATUS CHANGE

ACCOUNT NUMBER 091790 BUS CODE 101

...P • 7/90 • v 2.1 L.A. County HMCP • 2615 S. Grand Ave., Room 601 • Los Angeles, CA 90007 • (213) 744-3223 • FAX (213) 744-5305

DBA Continental Heat Treating Inc	Interviewed Dee Grams
Owner "	Title Controller
Partner	Start Date 1/69 — # of employees 36 50-70 Bergh or Marg
Address 10643 S Norwalk B. (unit / number / dir / street name / type)	# of shifts 2 5/4 — Operating Hours x 5 D
# — City SFS — Zip Code 90670	Violation Rank ☐ I ☐ II ☐ III
Mailing	Waste Cat 1 2 3 4
	Amt (PGT)
	P = pounds, G = gallons, T = tons; per quarter

Product / Service Annealing Service Steel Mostly — EPA#

☐ HRF	Materials	Quantity	Storage
# UST	Size / For	# AST	Size / For

PROCESS FLOWCHART

process & materials → hazardous waste & rate generated → storage method (drum/AST/UST) → hauler manifest number & date → disposal method / environmental fate

☐ Hearing / / ☐ Revisit / / ☐ Abatement / /

a l s	Violations / Remarks
SHA	
HS	Signature(s)

L.A. County HMCP • 2615 S. Grand Ave., Room 601 • Los Angeles, CA 90007 • (213) 744-3223 • FAX (213) 744-5305

PRINT

COUNTY OF LOS ANGELES—PUBLIC HEALTH LICENSE APPLICATION

ACCT. 606073

E 12/10/91 DL # _____ DATE BUSINESS STARTED 07 01 91 (MO DAY YR)

ME(S) CONTINENTAL HEAT TREATING IN (LAST, FIRST AND MIDDLE INITIAL) 1010 (BUSINESS CODE)

LAST, FIRST AND MIDDLE INITIAL

IS ME CONTINENTAL HEAT TREATING IN 13 (DISTRICT CODE)

10643 (BEGINNING NO.) ENDING NO. FRACTION S (DIR.) NORWALK BL (STREET)

SFS (CITY) 90670 (ZIP CODE)

10643 S NORWALK BL (NUMBER AND STREET)

SANTA FE SPRINGS (CITY) CA (STATE) 90670 (ZIP CODE)

HAZ WASTE CONTROL PROGRAM (36) VEH. LICENSE NO./ NO. OF MACHINES S 1 C

944-8808 PREVIOUS ACCOUNT NUMBER IF ANY 153090

U.S. MAIL SIGNATURE OF FIELD REPR. George H Baker

FOR TAX COLLECTORS USE	
CURRENT FEE $	
PRORATION $	
PENALTY $	
PRIOR YEAR FEE $	
PRIOR YEAR PEN $	
PAY-TOTAL FEE DUE $	

(OFFICE ADDRESS)

OFFICIAL NOTICE OF VIOLATION No. 042136

County of Los Angeles Department of Health Services
Community Health Services — Environmental Management

DATE 3/16/84

wer Industries - Att: Dennis Hugue ADDRESS 10643 S. Norwalk - S.F.S 90670.

ECT Hazardous Waste ADDRESS above

You are hereby directed to remove oil from ground in rear storage area

IF CLEANUP REQ. DETAIL CLEAN-UP PLAN IF NECESSARY. DESC. WHAT IS TO BE DONE.

This notice shall be complied with as required by: ☐ State Health ... Safety Code ☒ California Administrative Code, ☒ Los Angeles County Ordinance No. 1583 ☐ ... Ordinance No. ..., Other Code ...

... COUNTY HEALTH OFFICER

Address 10643 S
City S.F.S.
Mailing
Product / Service
☐ HRF Materials Additional
UST Size / For
process & materials → PRO hazardous waste & rate generator

Address 10643 S. Uxwalk Blvd

City, Zip Code 90670

2615 South Grand Avenue, Room 607
Los Angeles, CA 90007
(213) 744-3223
James Colling

NOTICE OF VIOLATION AND ORDER TO COMPLY

The following conditions or practices observed at your facility are violations of the California Code of Regulations (CCR), Title 26, Division 22 or the California Health and Safety Code, Division 20, Chapter 6.5, (H&S) or both, which relate to the disposal, management, transportation, and storage of hazardous waste. YOU ARE DIRECTED TO CORRECT THE VIOLATIONS WITHIN THE TIMES SPECIFIED BELOW.

CORRECTION DATE

DISPOSAL:

5/19/89 ☒ 1. Discontinue the disposal of hazardous waste to an unauthorized point(s). (H&S 25189.5). ~~any waste oil onto the ground~~

_____ ☐ 2. Legally dispose of all hazardous waste and contaminated materials (H&S 25189.5) _____ discharged to _____

_____ ☐ 3. Legally dispose of all stored hazardous waste and contaminated materials located at (H&S 25___) _____

C.K. 5/19/89 — Overwol by GB.

MANAGEMENT:

~~5/19/89~~ ☒ 4. Submit to this office a copy of your facility's hazardous materials contingency plan and employee training plan. (CCR 67105, 67120-67126, 67140-67145)

TRANSPORTATION:

☐ 5. Discontinue the transport of hazardous waste until the following have been met:

_____ ☐ A. Obtain an EPA Identification Number from the State Department of Health Services at (916) 324-1781. (CCR 66472)

_____ ☐ B. Complete a uniform Hazardous Waste Manifest or obtain a receipt when applicable under State Department of Health Services variance procedures. (H&S 25160 and 25143)

_____ ☐ C. Transport all hazardous waste by a State registered hauler. (H&S 25163)

_____ ☒ 6. Submit to this office a copy of the completed hazardous waste manifest(s) used to dispose of all completed manifests (CCR 66328).

Note → ☐ 7. Keep copies at your facility of all completed manifests, receipts or both for a minimum of three (3) years and make documents available for agency review. (CCR 66492)

STORAGE:

_____ ☐ 8. Discontinue the storage of hazardous waste for longer than 90 days without a permit from the State Department of Health Services. (CCR 66508)

5/19/89 ☒ 9. Store all hazardous waste in compatible containers which are closed and in good condition. (CCR 66241 - 67243) keep lids + bungs on, don't over fill

6/19/89 ☒ 10. Properly label all containers with the following: the words, "HAZARDOUS WASTE", name and address of generator; hazardous properties; a composition and physical state of the waste; and the accumulation date. (CCR 66508) Label waste oil as waste oil

OTHER:

_____ ☐ 11. Provide this office with a site assessment and mitigation plan for the contamination at your facility. _____

_____ ☒ 12. ~~Remove + locally dispose of oily surface on clean asphalted yard~~

Failure to fully comply with this Notice and Order may result in further legal action.

X _____
Owner or Authorized Representative

James Colling / GB
Hazardous Materials Specialist

HMCP 2/89

[illegible] WASTE CONTROL PROGRAM

DATE: 3-19-89

COMPANY NAME	STREET	CITY & ZIP
Continental Heat Treating	10643 Norwalk Bl	SFS 90670
OWNER	**PERSON INTERVIEWED & TITLE**	**PHONE NO.**
Stall, James, - owner	Bastian, Mike, GM.	(213) 944-1808
		EMERGENCY NO.

L.A. CO. PHL NO.	INDUSTRIAL WASTE NO.	EPA NO.
153090-101		CAD053582985

SAFETY SHOWER: ok
EATING AREA: ok
TOILET & WASHING FACILITIES ADEQUATE
PLANT SANITATION ADEQUATE: ok

TYPE OF FACILITY & DESCRIPTION OF OPERATION/PRODUCTS:
Metal Heat Treating

HAZARDOUS WASTE

PROCESS	MATERIAL	TYPE	VOL/LBS	STORAGE METHOD	DISPOSAL METHOD	MANIFEST	CO
(1) Degreasing	PERC	~~2,200g~~ waste PERC	2,200 gal/year	55 gal steel	Acto-Kleen (Pico Rivera)	400 gal (10 drum) 3/21/89 8774641705	AA Dis 8774
quenching	Mineral oil	min oil water mix		Clarifier pumped once per quarter yr	Disposal Control Service	8449701 2 11-29-88 1200 Gal.	Dom Rev 8
(3) Floor sweeping s spills	Dry absorbant	—	Irregular		Disposal Control Service.	13 drum 12-5-88 875 95747	Cas R n
(4) Retort & Temporary	H_2		approx 2500 gal/mo	used in process	to atmosphere as reacted & unreacted gas		
(5) Vacuum Furnace cooling & backfill	N_2		approx 5000 gal/mo 2 tanks				

NUMBER OF UNDERGROUND STORAGE TANKS:
VOLUME & TYPE OF WASTE IN UNDERGROUND TANK(S):
PRIVATE DISPOSAL SYSTEMS ON PREMISES: YES ___ NO ___

ACCESS TO STORM INLET ON PREMISES: Yes
CHLORINATED HYDROCARBON USED: YES ✓
SEWER CONNECTION ON PREMISES: YES ✓

REMARKS: Hauls approx. 1/quarter all wastes
apparent motor oil discharge(s) with one auto typical filter on ground 54

VIOLATIONS:

REFERRAL TO:

ACTION:

SURVEY CONDUCTED BY: James Adams

HAZARDOUS WASTE CONTROL PROGRAM DATE: 5/19-85 p2

NAME	STREET	CITY & ZIP	DISTRICT
	PERSON INTERVIEWED & TITLE	PHONE NO. / EMERGENCY NO.	NO. EMPLOYEES

PHL NO.	INDUSTRIAL WASTE NO.	EPA NO.

FACILITY & DESCRIPTION OF OPERATION/PRODUCTS:

SAFETY SHOWER _____
EATING AREA _____
TOILET & WASHING FACILITIES ADEQUATE _____
PLANT SANITATION ADEQUATE _____

HAZARDOUS WASTE

	MATERIAL	TYPE	VOL/LBS	STORAGE METHOD	DISPOSAL METHOD	MANIFEST	CONTROL	I.H. HAZARD
Service	oils grease				Service Company			
pumps	oil	waste oil			onto ground asphalt top at rear yard			
c pump								
cleaning sting steel	Steel shot glass beads	dust		swept to	domestic trash			

OF UNDERGROUND STORAGE TANKS:
& TYPE OF WASTE IN UNDERGROUND TANK(S):
E DISPOSAL SYSTEMS ON PREMISES: YES ___ NO ___

ACCESS TO STORM INLET ON PREMISES: Yes ___ No ___
CHLORINATED HYDROCARBON USED: YES ___ NO ___
SEWER CONNECTION ON PREMISES: YES ___ NO ___

S: AQMD for ovens + vapor degreaser

IONS:

TO: ACTION: SURVEY CONDUCTED BY:

1606D73

COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES
HAZARDOUS WASTE CONTROL PROGRAM

DATE: 5-19-89 R3

NAME	STREET	CITY & ZIP	DISTRICT
	PERSON INTERVIEWED & TITLE	PHONE NO. EMERGENCY NO.	NO. EMPLOYEES

PHL NO.	INDUSTRIAL WASTE NO.	EPA NO.

FACILITY & DESCRIPTION OF OPERATION/PRODUCTS:

SAFETY SHOWER _____
EATING AREA _____
TOILET & WASHING FACILITIES ADEQUATE _____
PLANT SANITATION ADEQUATE _____

HAZARDOUS WASTE

	MATERIAL	TYPE	VOL/LBS.	STORAGE METHOD	DISPOSAL METHOD	MANIFEST	CONTROL	I.H. HAZARD
...iting	Anhyd NH_3	→	600 gal tank	→ Consumed in process				
...iping	rags	oil solvent	→	covered cans	→ Prudential overall service			

UNDERGROUND STORAGE TANKS:
TYPE OF WASTE IN UNDERGROUND TANK(S):
DISPOSAL SYSTEMS ON PREMISES: YES ___ NO ___

ACCESS TO STORM INLET ON PREMISES: Yes ___ No ___
CHLORINATED HYDROCARBON USED: YES ___ NO ___
SEWER CONNECTION ON PREMISES: YES ___ NO ___

(R)

Ray Berry - Pres

PERSON INTERVIEWED & TITLE: Dennis Hugle - Production Mgr

PHONE NO.: 685-6920

EMERGENCY NO.:

NO. EMPLOYED: 42

SIC: 90-101

INDUSTRIAL WASTE NO:

EPA NO.: CAD053858296

SAFETY SHOWER: No

EATING AREA: Yes

TOILET & WASHING FACILITIES ADEQUATE: Yes

PERSONNEL PROTECTIVE DEVICES ADEQUATE: Yes

PLANT SANITATION ADEQUATE: Yes

FACILITY & DESCRIPTION OF OPERATION/PRODUCTS: Treating of Steel (including Stainless)

	MATERIAL	CONTROL	I.H. HAZARD	HAZARDOUS WASTE TYPE	VOL./DIS.	STORAGE METHOD	DISPOSAL METHOD	MANIFEST
Treatment annealing, hardening, water quenching, cleaning, degreasing (vapor) - Perchlorethylene, trichlorethane, glass blasting (Silica), acetone	steel, Quenching oil, Perchlorethylene, 1-1-1 Trichlorethane, acetone	type of oil?		Oil	110 gal/MO	Drum	Removed by Hauler - Lakewood Oil Service to BKK	Yes
				1-1-1 T.C.E, Acetone	4 gal/Mo	Drum	Manifest req. Removed by Supplier	
				Perchlorethylene	150 gal/MO	Drum	ACTO Kleen 7869 Paramount Blvd Pico Rivera	
				Cyanide wastes	4 gal/MO	Drum in Bermed area	Removed to BKK by Nash Salvage 16211 Phlox Dr - Whittier	

how disposed? Trash

how used / how disposed in waste? oil

Is the process annealed - lead or salt bath hardening

non-slow cool what types

with described in process section

Is this molten bath for carburizing

UNDERGROUND STO TANKS: 1 gasoline + 6000 gal

TYPE OF WASTE IN UNDERGROUND TANK:

DISPOSAL SYSTEMS ON PREMISES: YES ___ NO ✓

ACCESS TO STORM DRAIN INLET ON PREMISES: YES ___ NO ✓

CHLORINATED HYDROCARBON USED: YES ✓ NO ___

SEWER CONNECTION ON PREMISES: YES ✓ NO ___

AQMD permits on file (gasoline tanks, abrasive blasting)

NOTES: oil on small area - NOV to be sent

ACTION:

SURVEY CONDUCTED BY: 3/16/84

[redacted]

DBA CONTINENTAL HEAT TREATING INC	Phone 310 [redacted] 3808
Owner JAMES G. ZIMMERMAN	Interviewed Ron Cross
Partner	Title MECHANIC
Address (number / dir / street name / type) 10643 S NORWALK BL	Product/Service HEATING TRE
Unit # / City SFS / Zip 90670	
Mailing SA	Start Date '69 / # of employees 33
	# of shifts 3 / Operating hours x5

Viol Rank 3	CA Waste Code	1 221	2 223	3 213	4 211
☐ HWUT	Amt (PGT) Pounds, Gallons, Tons; per quarter				600 G
☐ HRF	Mtl/Qty				

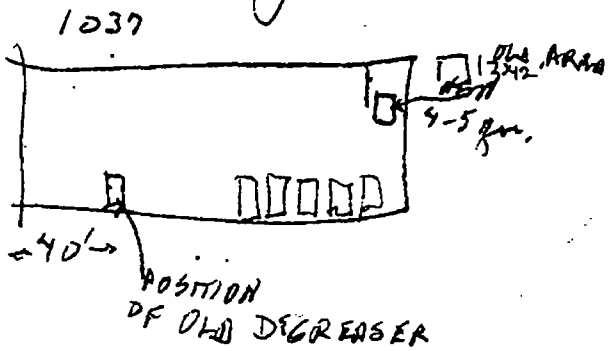
Referrals ☐ AQMD ☐ B&S ☐ Fire ☐ IW ☐ OSHA ☐ SDHS ☐ _____

Viol 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 (41) 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 (63) 64 65 99

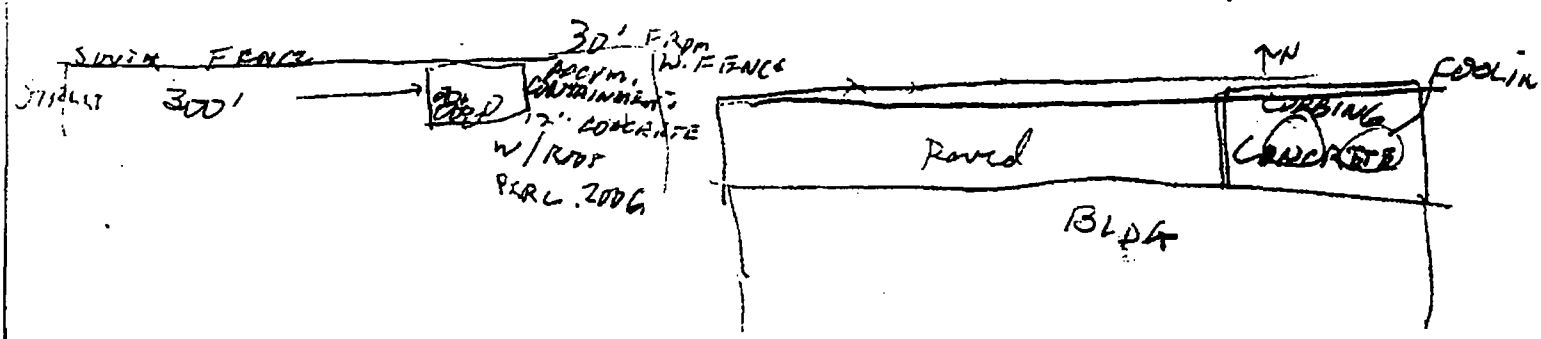
Visit Date	Start Time	Insp	Action	Time Invested	Special Circumstances
10/06/94	10:15	08	C -N	2:30	Complaint 33143-118
01/06/95	:			:	with Lance Ralston
/ /	01:5		C	2:—	Lance Ralston
/ /	:			:	

Signature(s) Roger T. Baker

Action codes: A-Abate C-Complaint E-Enforce H-Hearing I-Insp M-site Mit N-NOV O-no viol P-PHL Inv R-Revisit S-Samples T-Time ext X-other Z-non-gen



FIN DEL GRANG
24 hr. 33-0206111
310 697-0903
DENNIS HUGIE
→ ROCHEM.



Name [illegible]

Business CONTINENTAL HEAT TREATING INC.

Address 10643 S. NORWALK BL.

City, ZIP Code SANTA FE SPRINGS 90670

Reply To: G. BAKER
HEALTH HAZARDOUS MATERIALS DIVISION
7300 Alondra Bl/Ste 203
Paramount CA 90723
Office (310) 790-1810
Fax (310) 790-8002

Violations: The conditions or practices checked below represent a violation of the referenced section of Title 22, California Code of Regulations (22 CCR, Div 4.5, Ch 10, Sec 66260.1 et seq), and/or Health & Safety Code Chapter 6.5 (H&S, Div 20, Ch 6.5, Sec 25100 et seq) for which there are civil and criminal penalties. Time granted for correction of violations does not preclude any enforcement action by this Department or other agencies. **You are directed to correct the violations within the times specified. Failure to do so will be considered an additional violation.**

HAZARDOUS WASTE DETERMINATION

Correction Date __/__/__

01 ☐ Provide a hazardous waste determination for (CCR 66262.11)

DISPOSAL

Correction Date __/__/__

Discontinue the illegal disposal of hazardous waste and/or extremely hazardous waste to an unauthorized location (H&S 25189.5):

02 ☐ trash/dumpster/ground;
03 ☐ storm drain;
04 ☐ sewer/septic system with a permit;
05 ☐ unpermitted facility.
06 ☐ Discontinue the disposal of hazardous materials containers which are not legally empty (CCR 66261.7)

EPA NUMBER/PERMITS

Correction Date __/__/__

Obtain the following from the Cal-EPA:

07 ☐ EPA Identification Number (contact Cal-EPA, 916-324-1781, for ID number) (CCR 66262.12);
08 ☐ on-site waste treatment/disposal permit for (CCR 66270.1)

09 ☐ extremely hazardous waste permit for handling and disposal of (CCR 67430.1)

STORAGE AND MANAGEMENT OF CONTAINERS

Correction Date __/__/__

Discontinue the on-site accumulation of hazardous waste:

10 ☐ longer than 90 days without an extension from DTSC (CCR 66262.34(c));
11 ☐ longer than 90 days after 100 kg has been accumulated (CCR 66262.34(d));
12 ☐ longer than 1 year or 90 days after 55 gallons has been accumulated at satellite storage.

Label the waste container with the following:

22 ☐ the words, "HAZARDOUS WASTE" (CCR 66262.34(f));
14 ☐ description of contents / hazardous property of waste / generator name and address (CCR 66262.34(f));
13 ☐ accumulation start date (CCR 66262.34(f)).

Provide hazardous waste containers which are:

15 ☐ in good condition (CCR 66265.171);
16 ☐ compatible with waste contents (CCR 66265.172);
17 ☐ closed/sealed during storage (CCR 66265.173);
18 ☐ handled/stored/segregated to minimize waste release/reaction (CCR 66265.177(c));
19 ☐ inspected at least weekly (CCR 66265.174).
25 ☐ Label hazardous materials properly within 10 days or handle as hazardous waste (CCR 66261.2(f)(1)).
26 ☐ Store hazardous materials properly within 96 hours or handle as hazardous waste (CCR 66261.2(f)(2)).
20 ☐ Properly manage used oil filters (CCR 66266.130).
21 ☐ Properly manage spent lead-acid storage batteries (CCR 66266.81).

TANK REGULATIONS

Correction Date __/__/__

23 ☐ Discontinue storing incompatibles in the same tank (CCR 66265.199).
24 ☐ Inspect tank and tank equipment daily and document in the operating record of the facility (CCR 66265.195).

Authorized rep RAY CROSS	Title MECHANIC	Page 1 of 2
Auth rep signature [signature]	Inspected by [signature]	LACoFD HHMD • NV1-PAR • v2.5 • 6/93

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WHITE - OWNER CANARY - DISTRICT PINK - PROCESSING UNIT

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waste tank systems (CCR 66265.193).

29 ☐ Provide a written assessment for tank system (CCR 66262.192).

RECORDKEEPING

Correction Date __/__/__

30 ☐ Keep waste analysis/test records for at least three years (CCR 66262.40(c)).

31 ☐ Send Biennial Report to DTSC (CCR 66262.41).

32 ☐ Retain copies of biennial and exception reports for at least three years (CCR 66262.40(b)).

TRAINING

Correction Date __/__/__

33 ☐ Provide a training program (CCR 66265.16).

34 ☐ Train and supervise personnel within six months of hire date and retrain as needed (CCR 66265.16(b)).

36 ☐ Keep training records on site (CCR 66265.16(d)).

37 ☐ Maintain training records until closure of facility or for at least three years (for former employees) (CCR 66265.16(e)).

CONTINGENCY PLAN/BUSINESS PLAN

Correction Date 10/6/94

38 ☐ Submit a contingency/business plan (CCR 66265.53(b)).

39 ☐ Complete contingency/business plan (CCR 66265.52).

40 ☐ Maintain copy of plan on site (CCR 66265.53).

41 ☒ Amend and update plan as necessary (CCR 66265.54).

42 ☐ Assign Emergency Coordinator to facility (CCR 66265.55).

SUBMIT UPDATE TO THIS OFFICE BY 11/6/94 (NOV 6, 1994)

PREPAREDNESS AND PREVENTION

Correction Date __/__/__

43 ☐ Maintain facility to minimize possibility of fire or release of hazardous waste or constituents (CCR 66265.31).

44 ☐ Provide an internal communications or alarm system (CCR 66265.32(a)).

45 ☐ Provide a device capable of calling outside emergency help (CCR 66265.32).

46 ☐ Provide access to communication/alarm system during waste handling (CCR 66265.34).

47 ☐ Provide fire/spill control or decontamination system (CCR 66265.32(c)).

48 ☐ Test and maintain emergency equipment (CCR 66265.33).

49 ☐ Maintain required aisle space (CCR 66265.35).

MANIFESTS/RECEIPTS

Correction Date __/__/__

50 ☐ Discontinue shipping hazardous waste without a manifest (CCR 66262.42).

57 ☐ Maintain manifest copy for three years from shipment (CCR 66262.40).

51 ☐ Maintain completed modified manifest/receipt(s) on site for at least three years (CCR 66263.42).

52 ☐ Maintain used oil manifest/receipt(s) on site for at least three years (H&S 25250.8).

53 ☐ Provide manifest copies to DTSC within 30 days (CCR 66262.23).

54 ☐ Complete all applicable sections of the manifest (CCR 66262.23).

55 ☐ Determine status of waste when TSD facility manifest copy is not received within 30 days (CCR 66262.42).

56 ☐ Send Exception Report to DTSC within 45 days (CCR 66262.42).

58 ☐ Provide proper documentation for excluded recyclable materials (H&S 25143.10).

TRANSPORT

Correction Date __/__/__

59 ☐ Discontinue shipping hazardous waste by transporters lacking an EPA ID No. (CCR 66262.12).

60 ☐ Discontinue shipping hazardous waste to TSD facilities lacking an EPA ID No. (CCR 66262.12).

OTHER

Correction Date 10/06/94

61 ☐ Provide Hazardous Waste Management Performance Plan and Report for review (H&S 25244.21).

62 ☐ Provide a copy of LDR notice/certification for each shipment of restricted hazardous waste (CCR 66268.7).

63 ☒ Provide a corrective action plan for unauthorized releases of hazardous waste or constituents (H&S 25187).

64 ☐ Legally remove hazardous waste/contamination before the closure of the facility (CCR 66265.11).

#63 EVALUATE THE AREA VICINITY 120' W. OF THE EAST WALL AND 30' S. OF THE NORTH WALL FOR SOIL CONTAMINATION BY CHLORINATED HYDROCARBON SOLVENT

PROVIDE PLAN TO THIS OFFICE NO LATER THAN NOV 20, 1994.

Authorized rep	RAY CROSS	Title	MECHANIC
Auth rep signature	Ray Cross	Inspected by	[illegible]

Page 2 of 2

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WHITE - OWNER CANARY - DISTRICT PINK - PROCESSING UNIT

[redacted]

[redacted]

ner JAMES G. ZIELL TRAITING INC	Interviewed Roy Cross
ner	Title MECHANIC
dress 10643 S NORWALK BL (number / dir / street name / type)	Product/Service HEATING TRE
City SFS Zip 90670	
iling SA	Start Date '69 # of employees 33
	# of shifts 3 Operating hours 5

l Rank 3	CA Waste Code	1 221	2 223	3 213	4 211
HWUT	Amt (PGT) Pounds, Gallons, Tons per quarter				600 G
HRF	Mtl/Qty				

errals ☐ AQMD ☐ B&S ☐ Fire ☐ IW ☐ OSHA ☐ SDHS ☐ _____

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 99

Visit Date	Start Time	Insp	Action	Time Invested	Special Circumstances
10/6/94	10:15	08	C -N	2:30	Complaint 933143-118
/ /	:			:	with Lance Ralston
/ /	01:5		C	2:	Lance Ralston
/ /	:			:	

ure(s) Roger T. Baker

es: A-Abate C-Complaint E-Enforce H-Hearing I-Insp M-site Mit N-NOV O-no viol P-PHL Inv R-Revisit S-Samples T-Time ext X-other Z-non-gen

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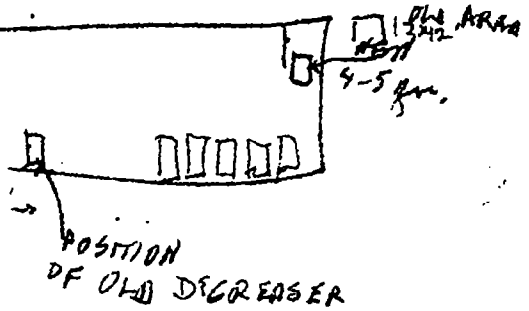

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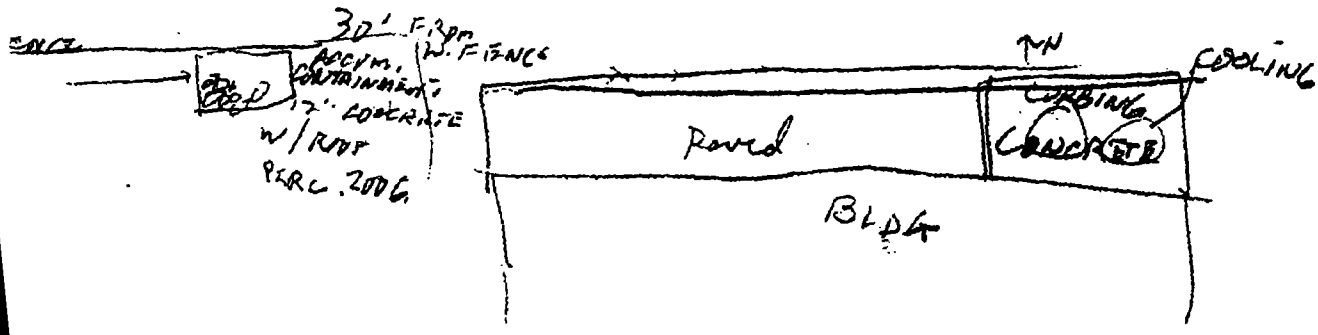

Page 1 of 2

AD • NV1-PAR • v2.5 • 6/93

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Authorized rep RAY CROSS	Title MECHANIC	Page 2 of 2
Auth rep signature Ray Cross	Inspected by [signature]	LACoFD HHMD • NV1 • v2.5 • 8/93

WHITE - OWNER CANARY - DISTRICT PINK - PROCESSING UNIT

[redacted]

Section 1 General Business Information

Name of Business CONTINENTAL HEAT TREATING CO. INC.

Address 10643 S. NORWALK B.VD City SANTA FE SPRINGS Zip 90670

Phone Number(310) 944 -8808 Emergency Phone(310) 697 - 0903

Description of Business HEAT TREATING METAL PARTS

Number of Employees 30 Operating Hours(M-F) 24HRS M-F Sat ____ Sun ____

Business Owner JAMES G. STULL Home Phone Number(714) 675 - 0408

Address 319 GRAND CANAL City BALBOA ISLAND Zip 92662

Property Owner ANNA HATHAWAY TRUST Phone Number(714) 661 - 6969 C.P.A.

Section 2 Hazardous Material / Waste Activities - List all Chemicals at your business.

RAW MATERIALS				HAZARDOUS WASTE	
Chemical Name or Trade Name*	Specific Usage	Quantity of Chemicals Stored	Manner of Storage	Quantity of Waste Stored	Manner of Storage
OIL	QUENCH OIL	500 GAL	TANK	300 GAL	DRUMS
PERCHLORETHLENE	DEGREASING	200 GAL	TANK	300 GAL	DRUMS
ACETONE	CLEANING	55	DRUM	θ	θ
AMMONIA	CARBONITRIDE	250	TANK	θ	θ

*Obtain from your Supplier the Material Safety Data Sheets for trade name chemical and attach to this form.

Section 3 Emergency Coordinator

Your company is required to list the names, addresses, and telephone numbers for your emergency coordinators(EC). The EC shall have the authority to commit resources and shall have the responsibility for coordinating the company's activities to mitigate an unplanned release of hazardous materials.

Name of EC DENNIS HUGE AfterHours Phone(310) 697 - 0903

Address 141 NORTH VIRGINIA ST. City LA HABRA Zip 90631

Alternate EC RAY CROSS AfterHours Phone(909) 674 - 1529

Address 29264 NORTHPOINTE City LAKE ELSINORE Zip 92530

The EC must notify the following agencies in the event of a release, fire, or explosion which could threaten human health or the environment.

Fire 911 Health Haz Mat (213) 890-4317 Police 911

If the EC determines that evacuation of local areas may be advisable, the EC Shall notify the above agencies and the State Office of emergency Services at 1-800-852-7550.

List an Emergency Response Contractor you may use in the event of a major Hazardous Materials Spill.

Name PACIFIC ENVIRONMENTAL MGMT. Emergency Phone(800) 777 - 3363

List all hospitals or clinics you may use in the event of hazardous materials exposures or injuries.

Hospital or Clinic HEALTH FIRST MEDICAL Phone(310) 949 - 9328

Address 11817 E. TELEGRAPH RD City SANTA FE SPRINGS

The EC shall report to the Health Haz Mat Division within 15 days all details of any incident where this contingency plan was activated.

Section 5 Emergency Procedures.

Attach a description of what your employees will do to prevent or stop a hazardous materials spill at your facility. (Training is required for procedures involving the handling of hazardous wastes.)

Section 6 Site Map

Attach a map of your company and indicate the locations of the following:

*Layout work areas	*Gas & electrical shut-off	*Material Safety Sheets
*Fire Extinguishers	*Emergency Exits	*Underground Tanks
*Chemical Storage	*Waste Storage	*Above Ground Tanks
*Alarms - Telephone	*Offices & Restrooms	*Evacuation Routes
*Employee Protect'n Equip	*All Drains & Clarifiers	*Emergency Equipment
*First Aid Stations	*Emergency Shut-offs	*Leak detection devices

*Indicate schools, residences, and public gathering places less than a block away from your facility.

Section 7 Additional Requirements

This Contingency Plan must be updated on a continuous basis and copied to our office. This Contingency Plan is designed for your use in the event of a hazardous materials incident. You must keep copies of your completed plan at your facility at all times. Review the contents of the plan with your employees and make the location of your completed plan known and accessible to them.

Send your completed Contingency plan to the following address:

County of Los Angeles Fire Department-Prevention Bureau/HEALTH HAZ MAT DIVISION
7300 E Alondra Blvd. #203, Paramount, Calif. 90723
Phone: (310) 790-1810, Fax: (310) 790-8002

Your Inspector is: GEORGE BAKER

BUSINESS NAME CONTINENTAL HEAT TREATING CO. INC.

ADDRESS 10643 S. NORWALK BLVD. CITY SANTA FE SPRINGS ZIP 90670

Section 5: Emergency Procedures

In the event of a OIL spill, the following procedures will be followed.

[XX] Using DRY SORB the spilled material will be contained and prevented from going onto the ground or off the property.

[XX] The absorbed OIL & DRY SORB will be placed in a leak-proof container with tight fitting lid, labelled "Hazardous Waste" and held as hazardous waste until lawfully disposed.

[XX] Based on the:

- [XX] Material Safety Data Sheet
- [ ] Personal knowledge
- [ ] Other _____

of the Material, the following precautions should be taken when handling the spilled material:

Wear:

- [ ] Gloves and goggles
- [ ] Respirator
- [XX] Boots and Apron
- [ ] Other _____

See Reverse side, page 4 for Site Map

[redacted]

BUSINESS NAME CONTINENTAL HEAT TREATING CO. INC.

ADDRESS 10643 S. NORWALK BLVD. CITY SANTA FE SPRINGS ZIP 90670

Section 5: Emergency Procedures

In the event of a PERCHLORETHLYENE spill, the following procedures will be followed.

[XX] Using DRY SORB the spilled material will be contained and prevented from going onto the ground or off the property.

[XX] The absorbed DRY SORB will be placed in a leak-proof container with tight fitting lid, labelled "Hazardous Waste" and held as hazardous waste until lawfully disposed.

[XX] Based on the:

- [XX] Material Safety Data Sheet
- [ ] Personal knowledge
- [ ] Other _____

of the Material, the following precautions should be taken when handling the spilled material:

Wear:

- [XX] Gloves and goggles
- [XX] Respirator
- [XX] Boots and Apron
- [ ] Other _____

See Reverse side, page 4 for Site Map

[redacted]

[redacted]

ADDRESS 10643 S. NORWALK BLVD. CITY SANTA FE SPRINGS ZIP 90670

Section 5: Emergency Procedures

In the event of a ACETONE spill, the following procedures will be followed.

[XX] Using DRY SORB the spilled material will be contained and prevented from going onto the ground or off the property.

[XX] The absorbed ACETONE AND DRY SORB will be placed in a leak-proof container with tight fitting lid, labelled "Hazardous Waste" and held as hazardous waste until lawfully disposed.

[XX] Based on the:

- [XX] Material Safety Data Sheet
- [ ] Personal knowledge
- [ ] Other _____

of the Material, the following precautions should be taken when handling the spilled material:

Wear:

- [XX] Gloves and goggles
- [XX] Respirator
- [XX] Boots and Apron
- [ ] Other _____

See Reverse side, page 4 for Site Map

[redacted]

BUSINESS NAME CONTINENTAL HEAT TREATING CO. INC.

ADDRESS 10643 S. NORWALK BLVD. CITY SANTA FE SPRINGS ZIP 90670

Section 5: Emergency Procedures

In the event of a AMMONIA (NH3) spill, the following procedures will be followed.

[XX] Using DRY SORB the spilled material will be contained and prevented from going onto the ground or off the property.

[XX] The absorbed DRY SORB will be placed in a leak-proof container with tight fitting lid, labelled "Hazardous Waste" and held as hazardous waste until lawfully disposed.

[XX] Based on the:

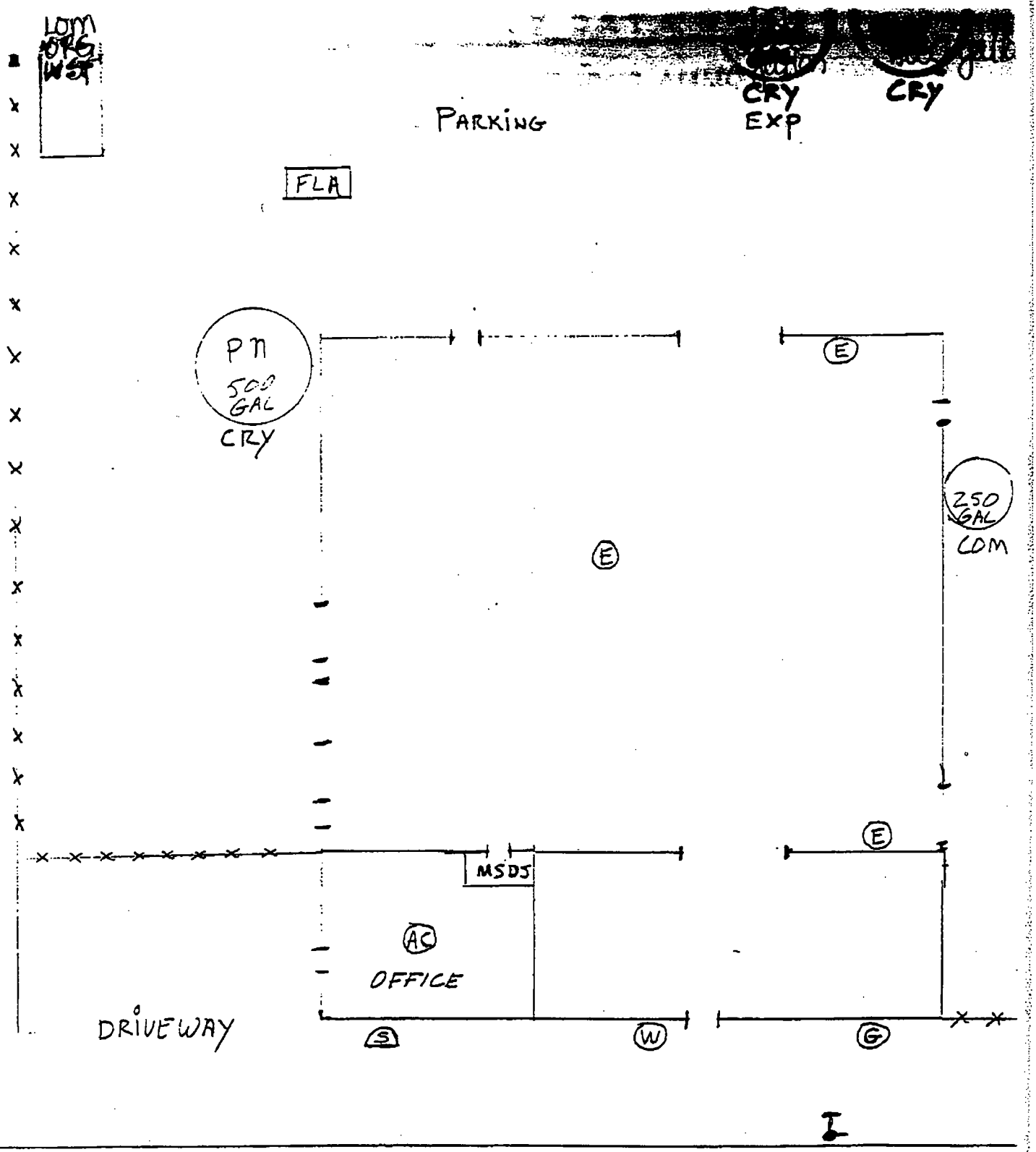
- [X] Material Safety Data Sheet
- [ ] Personal knowledge
- [ ] Other _____

of the Material, the following precautions should be taken when handling the spilled material:

Wear:

- [ ] Gloves and goggles
- [X] Respirator (APPROBED)
- [ ] Boots and Apron
- [X] Other FULL PROTECTIVE CLOTHING

See Reverse side, page 4 for Site Map



10643 SO NORWALK BLVD.

[redacted]

PRODUCT NAME: [redacted]

CAS NUMBER: 7664-41-7 [redacted]

HILL BROTHERS CHEMICAL CO.
1675 No. Main Street
Orange, California 92667

Telephone No: 714-998-8800
Outside Calif: 800-821-7234
CHEMTREC: 800-424-9300

Revision issued: 6/3/92 Supercedes: 5/21/92 First issued: 12/1/85

IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, HILL BROTHERS CHEMICAL COMPANY makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to exercise appropriate precautions for protection of employees and others.

SECTION I - PRODUCT IDENTIFICATION

SYNONYMS/COMMON NAMES: ANHYDROUS AMMONIA; AMMONIA; NH_3

CHEMICAL FAMILY / TYPE: HYDRIDE, (ALKALINE GAS), INORGANIC BASE

DOT PROPER SHIPPING NAME : AMMONIA ANHYDROUS LIQUEFIED

DOT HAZARD CLASS / UN/NA. #, PKG GRP: 2.2, UN1005,

REPORTABLE QUANTITY: 100 POUNDS (45.4 KILOGRAMS) (16.80 GALS)

ADDITIONAL DESCRIPTION REQUIREMENT: INHALATION HAZARD.

NFPA RATING: HEALTH - 3; FIRE - 1; REACTIVITY - 0
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limits (TWAs) in Air ACGIH TLV	OSHA PEL	STEL*
AMMONIA	7664-41-7	100	25 ppm/ 18 mg/m^3	25 ppm/ 18 mg/m^3	35 ppm

*ACGIH short term exposure limit (STEL)

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: COMPRESSED GAS

Appearance/Color/Odor: COLORLESS GAS OR LIQUID WITH EXTREMELY PUNGENT ODOR

pH: 13+ Melting Point: -77.7° C; -107.9° F

[illegible]

Vapor Pressure(mmHg): [illegible] @ [illegible] °C; [illegible] °F Molecular Weight: 17.03

Specific Gravity(Water = 1): 0.68 @ -33.4°C; -28°F

Density(Air = 1): 0.6 (GAS), >1 (AEROSOL) **% Volatile(by volume):** 100%

SECTION IV - FIRE AND EXPLOSION

Flash Point: N/A **Autoignition Temperature:** 651°C; 1204°F

Lower Flammable Limit: 16% by Volume **Upper Flammable Limit:** 25% by Volume

Unusual Fire and Explosion Hazards: If involved in fire, 16% to 25% Ammonia mixture with air may explode. Keep container cool to prevent bursting or release of gas. The presence of oil or other combustible materials will increase the fire hazard.

Extinguishing Media: Water Spray or Water Fog, Carbon Dioxide, Polar or Alcohol Foam, Dry Chemical.

Special Firefighting Procedures: Stop flow of gas. Use water fog to keep fire-exposed containers cool and to protect the men effecting the shut-off. Wear self-contained breathing apparatus (SCBA) and encapsulating chemical protective clothing. Approach fire upwind and evacuate area downwind.

SECTION V - REACTIVITY

Stability: Stable **Hazardous Polymerization:** Will not occur

Conditions to Avoid: Heat, open flames.

Materials to Avoid: Contact with oxidizing gases, chlorine, bromine, mineral hypochlorite iodine, halogens, calcium, and strong acids. Contact with copper, silver, zinc, and alloys of same. Mercury, silver oxide or can form explosive compounds.

Hazardous Decomposition Products: Combustion will generate oxides of nitrogen.

SECTION VI - HEALTH HAZARDS

INGESTION: This material is a gas under normal atmospheric conditions and ingestion is unlikely. Ingestion of liquid ammonia may result in severe irritation or ulceration of the mouth, throat and digestive tract which may be displayed by nausea, vomiting, diarrhea and, in severe cases, collapse, shock and death.

INHALATION: Irritation to the mucous membranes of the nose, throat and lungs is noticeable at 100 ppm. Concentrations above 400 ppm will cause throat irritation and may destroy mucous surfaces upon prolonged contact. High concentrations can cause pulmonary edema. Breathing air containing concentrations greater than 5,000 ppm may cause sudden death from spasm or inflammation of the larynx.

SKIN: Liquid Ammonia produces severe skin burns on contact. Ammonia gas may cause skin irritation, especially if skin is moist. The liquid can cause skin damage resulting from combined freezing and corrosive action on the skin. Atmospheric concentrations above 30,000 ppm will burn and blister skin after a few seconds of exposure.

Carcinogenicity Listed: NO NTP: NO

IARC Monograph: NO OSHA Regulated: YES

Signs and Symptoms of Exposure: Burning of the eyes, conjunctivitis, skin irritation, swelling of the eyelids and lips, dry red mouth and tongue, burning in the throat, and coughing. In more severe cases of exposure, difficulty in breathing, signs and symptoms of lung congestion, and, ultimately, death from respiratory failure due to pulmonary edema may occur

Effects of Overexposure: Irritation and burns of the skin and mucous membranes. Headache, salivation, nausea, and vomiting. Difficult or labored breathing and cough with bloody mucous discharge. Bronchitis, laryngitis, hemoptysis; and pulmonary edema or pneumonitis. Death may result. Ulceration of the conjunctiva and cornea, and corneal and lenticular opacities. Damage to the eyes may be permanent.

Emergency and First Aid Procedures:

INGESTION: If this gas is swallowed in liquid form, keep victim warm and OBTAIN MEDICAL ATTENTION. If signs of respiratory obstruction develop; immediately transport to medical facility. Do not induce vomiting. Never give fluids or induce vomiting if patient is unconscious or having convulsions.

INHALATION: Remove victim to fresh air. Give oxygen if breathing is difficult. If breathing has stopped, start artificial respiration. OBTAIN MEDICAL ATTENTION.

SKIN: Apply water immediately to exposed areas of skin and continue for at least 30 minutes. Remove contaminated clothing while continuing to apply water, being careful not to tear the skin. Do not apply salves or ointments to affected areas. OBTAIN MEDICAL ATTENTION.

EYES: Remove victim to fresh air. Immediately flush with flowing water for at least 30 minutes with the eyelids held apart. OBTAIN MEDICAL ATTENTION.

Medical Conditions Generally Aggravated by Exposure: Ammonia is a respiratory irritant. Persons with impaired pulmonary function may be at increased risk from exposure.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled:
[Spills may need to be reported to the National Response Center (800/424-8802) DOT Reportable Quantity (RQ) is 100 pounds] Do not apply water onto leaking tank. Stop the flow of gas or liquid. Wear full protective clothing and self-contained breathing apparatus. Use water to protect men effecting the shut-off. Approach from upwind. Dike liquid spills to contain liquid. Evacuate the area immediately. Eliminate all open flames in vicinity of indoor spills or released vapor. Water fog can be used to cleanse atmosphere of ammonia vapor. Downwind areas can be protected by water fog nozzles positioned downwind.

Handling and Storing Precautions: Protect against physical damage. Outside shaded area or detached storage is preferred. Inside storage should be in a cool, dry, well ventilated, noncombustible location, away from all possible sources of ignition. Separate from other chemicals, particulary oxidizing gases, chlorine, bromine, iodine, and acids. Avoid ingestion, inhalation, and contact with skin or eyes.

[redacted]

Other Precautions: Highly toxic to fish and aquatic life. Do not contaminate any body of water by direct application, cleaning of equipment, or disposal. Since ammonia is a fertilizer, it may promote eutrophication (high in nutrients, low in oxygen) in waterways.

SECTION VIII - CONTROL MEASURES

Respiratory Protection: Unless ventilation is adequate to keep airborne concentrations below the exposure standard, wear approved respiratory protection such as an ammonia canister mask or an approved air supplied respirator. Canister or cartridge type masks must not be used above their exposure limits. Use self-contained breathing apparatus (SCBA) in an area where the exposure level is above the limit of canister or cartridge type masks. In an emergency use only self-contained breathing apparatus (SCBA) to enter areas of ammonia exposure.

Ventilation: Local exhaust is essential. Spark-proof fans desirable with mechanical ventilation. Ducts should be located at ceiling level and lead upwards to the outside.

Protective Clothing: Rubber or synthetic chemical gloves and boots; cotton clothing and underwear. Rubber or synthetic chemical coats or aprons should be available, an encapsulating chemical protective clothing garment is desirable for heavy exposures.

Eye Protection: Gas-tight chemical safety goggles must be worn if there is a likelihood of exposure. Persons subject to ammonia exposure must not wear contact lenses.

Other Protective Clothing or Equipment: Eyewash fountain and safety shower should be available in work area. The use of long sleeved clothing closed at the neck is advised. Change if clothing becomes contaminated.

SECTION IX - SUPPLEMENTAL INFORMATION

IDLH Value*: ~500 ppm

***The Immediately Dangerous to Life and Health Value**

Section 313 Supplier Notification: This product contains the following toxic chemical(s) subject to the reporting requirements of SARA TITLE III Section 313 of the Emergency Planning and Community Right To Know Act of 1986 and of 40 CFR 372:

CAS #	CHEMICAL NAME	% BY WEIGHT
7664-41-7	AMMONIA	100

Environmental Impact: Certain geographical areas have air pollution restrictions concerning use of Anhydrous Ammonia in work situations which may release Ammonia to the atmosphere. Air pollution regulations should be studied to determine if Anhydrous Ammonia is regulated in the area where it is to be used. In use and disposal of Anhydrous Ammonia, care must be taken to prevent contamination of water supplies. By increasing water alkalinity, it tends to diminish bacterial activity necessary for proper waste water treatment. Concentrations as low as 0.3 mg/l have been toxic to fish.

RHO-CHEM CORP.
425 ISIS AVE.
INGLEWOOD, CA 90301
(213)776-6233

PERCHLOROETHYLENE

SECTION 1 IDENTIFICATION

PRODUCT: PERCHLOROETHYLENE
CHEMICAL FAMILY: CHLORINATED HYDROCARBON SOLVENT
SYNONYM: TETRACHLOROETHYLENE
STOCK NUMBERS:

TECHNICAL GRADE:	2006	RECONSTITUTED GRADE:	2406
ELECTRONIC/SEMI GRADE:	2356	A.C.S. REAGENT GRADE:	3356

DEPARTMENT OF TRANSPORTATION (DOT) IDENTIFICATION

REPORTABLE QUANTITY (RQ) ONE HUNDRED (100) FOUND OR 45.4 KILOGRAM PER 49 CFR 172.101 LIST OF HAZARDOUS SUBSTANCES
DOT PROPER SHIPPING NAME: PERCHLOROETHYLENE
DOT HAZARD CLASS: ORM-A
DOT IDENTIFICATION NUMBER: UN-1897

HAZARDOUS WASTE IDENTIFICATION
U.S. EPA WASTE NUMBER: F001 CALIFORNIA: 211

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT:
THIS CHEMICAL IS NOT PHOTOCHEMICALLY REACTIVE
VOLATILE ORGANIC COMPOUND (VOC) = 1610 grams/Liter

SECTION 2 PRODUCT/COMPOSITION DATA

COMPONENT #	COMPONENT	CAS NUMBER	PERCENT
1	PERCHLOROETHYLENE	127-18-4	100

*SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT OF 1986 ("PROPOSITION 65") WARNING:

DETECTABLE AMOUNTS OF CARBON TETRACHLORIDE ARE PRESENT IN COMPONENT #1. THE CONCENTRATION LEVEL IS APPROXIMATELY 2.0 PARTS PER MILLION. THE DETECTION LIMIT FOR THIS CHEMICAL IS VARIABLE, AND DEPENDS UPON THE DETECTION INSTRUMENT'S SPECIFICITY, SENSITIVITY, THE ANALYTICAL METHOD UTILIZED, AND VARIOUS OTHER PARAMETERS.

SECTION 3 PHYSICAL DATA

BOILING POINT OR RANGE (DEG. F)	SPECIFIC GRAVITY (25/25C)	SOLUBILITY IN WATER @25C (WT %)
250	1.62	0.015

VAPOR PRESSURE (mm Hg)	VAPOR DENSITY IN AIR (AIR=1)	% VOLATILE BY VOLUME	EVAPORATION RATE ETHER = 1
18 @ 25C	5.83	100	0.12

APPEARANCE: CLEAR COLORLESS LIQUID ODOR: SWEET ETHER LIKE

SECTION 4A HEALTH INFORMATION-HEALTH RATING

HAZARDOUS MATERIALS IDENTIFICATION SYSTEMS (HMIS)

HEALTH (3) FIRE (0)

REACTIVITY (0) PERSONAL PROTECTION (C) SAFETY GLASSES GLOVES / APRON

SECTION 4B HEALTH INFORMATION-ACUTE TOXICITY DATA

COMPONENT #	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	RAT: >5.0 G/KG	RABBIT: >10.0 G/KG	RAT 5040 PPM/8HR

SECTION 4C HEALTH INFORMATION-OCCUPATIONAL EXPOSURE LIMITS

COMPONENT	(OSHA) PEL/TWA	(OSHA) PEL CEILING	(ACGIH) TLV/TWA	(ACGIH) TLV/STEL
1	50 PPM	300 PPM	50 PPM	200 PPM

SECTION 4D HEALTH INFORMATION - EFFECTS OF EXPOSURE

EFFECTS DESCRIBED IN THIS SECTION ARE BELIEVED NOT TO OCCUR IF EXPOSURES TO THE PRODUCT ARE MAINTAINED BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 4C. PREEXISTING SKIN, EYE, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE.

POTENTIAL ROUTE OF ENTRY

INHALATION _X_ SKIN _X_ INGESTION _X_

INHALATION:

MAJOR POTENTIAL ROUTE OF EXPOSURE. 100 PPM FOR 7 HOURS CAUSES MILD IRRITATION TO EYES, NOSE, AND THROAT; FLUSHING OF FACE AND NECK; HEADACHE, SLURRED SPEECH, AND DROWSINESS. 200 PPM FOR 1 HOUR CAUSES THE SAME SYMPTOMS, PLUS DIZZINESS AND LIGHTHEADEDNESS. 600 PPM FOR 10 MINUTES CAUSES SENSATION OF NUMBNESS AROUND MOUTH, DIZZINESS, AND INCOORDINATION; 2,000 PPM CAUSES MILD NARCOSIS WITHIN 5 MINUTES. 5,000 PPM CANNOT GENERALLY BE TOLERATED AND CAUSES VERTIGO, NAUSEA, AND MENTAL CONFUSION. UNCONCIOUSNESS OR DEATH CAN OCCUR AT EXTREMELY HIGH CONCENTRATIONS OR ON PROLONGED EXPOSURES ABOVE 500 PPM.

SKIN:

LIQUID IS IRRITATING TO THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN TO BECOME REDDENED, ROUGH, AND DRY DUE TO THE REMOVAL OF NATURAL OILS, AND MAY RESULT IN DERMATITIS.

EYES:

LIQUID IS SEVERELY IRRITATING TO THE EYES.

LIQUID CAUSES TEMPORARY PAINFUL BURNING SENSATION, TEARING, GENERAL INFLAMMATION, AND BLURRED VISION.

HIGH VAPOR CONCENTRATION MAY ALSO CAUSE IRRITATION.

INGESTION:

LIQUID IS TOXIC AND MAY BE HARMFUL IF SWALLOWED.

SWALLOWING PRODUCT MAY RESULT IN GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.

ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITUS AND SYSTEMIC EFFECTS.

SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE:

INTENTIONAL ABUSE, MISUSE, OR OTHER MASSIVE EXPOSURE MAY RESULT IN DIFFICULT BREATHING, NAUSEA, VOMITING AND HEADACHE. COMA AND OR DEATH ARE POSSIBLE.

CENTRAL NERVOUS SYSTEM DEPRESSION RANGES FROM LIGHT HEADEDNESS TO UNCONSCIOUSNESS AND DEATH. CNS DEPRESSION IS EVIDENCED BY GIDDINESS, DIZZINESS AND NAUSEA.

ASPIRATION PNEUMONITUS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN). IN SEVERE CASES DEATH MAY OCCUR.

SECTION 4E SUPPLEMENTAL HEALTH INFORMATION

IS THE PRODUCT OR A COMPONENT OF THE PRODUCT LISTED AS A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM (NTP), INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) OR IS IT THE SUBJECT OF A HAZARD EVALUATION SYSTEM AND INFORMATION SERVICE (HESIS) HAZARD ALERT?

COMPONENT NUMBER	NTP CARCINOGEN	OSHA CARCINOGEN	IARC CARCINOGEN	HESIS HAZARD ALERT
1	NO	NO	NO	YES

COMPONENT INFORMATION

PERCHLOROETHYLENE: HAS CAUSED LIVER AND KIDNEY TOXIC EFFECTS IN CHRONICALLY OVER EXPOSED EXPERIMENTAL ANIMALS.

CARCINOGENICITY: THREE STUDIES HAVE BEEN CONDUCTED TO ASSESS THE CARCINOGENIC POTENTIAL OF PERCHLOROETHYLENE IN LABORATORY ANIMAL. IN ONE STUDY, RATS AND MICE WERE EXPOSED BY GAVAGE (FORCE-FED) AT LEVELS OF 500 AND 1000 MG/DG/DAY. INCREASED INCIDENCE OF LIVER TUMORS WERE OBSERVED IN MICE. THE RESULTS OF THE RAT STUDY WERE INCONCLUSIVE DUE TO AN EXCESS IN ANIMAL DEATHS. THE SECOND STUDY INVOLVED RATS EXPOSED TO CONCENTRATIONS UP TO 600 PPM VIA INHALATION, SIX HOURS PER DAY, 5 DAYS PER WEEK FOR ONE YEAR. THE ANIMALS WERE OBSERVED UNTIL THE TIME OF DEATH OR UNTIL THE 31ST MONTH AND STUDIES INDICATE NO STATISTICALLY SIGNIFICANT INCREASE IN TUMORS. THE SIGNIFICANCE OF THE SECOND STUDY HAS BEEN QUESTIONED, SINCE EXPOSURE LASTED FOR ONLY ONE YEAR. A THIRD STUDY CONDUCTED FOR THE NATIONAL TOXICOLOGY PROGRAM (NTP) INVOLVED EXPOSURE OF MICE TO 100 OR 200 PPM AND RATS TO 200 AND 400 PPM FOR SIX HOURS PER DAY, 5 DAYS PER WEEK FOR 2 YEARS. INCREASED INCIDENCE OF LIVER TUMORS WERE OBSERVED IN MICE. IN RATS AN INCREASE IN A RARE KIDNEY TUMOR WAS OBSERVED IN THE MALE RAT, AND BOTH MALES AND FEMALES HAD AN INCREASED INCIDENCE OF MONONUCLEAR CELL LEUKEMIA.

REPRODUCTIVE TOXICITY: STUDIES ON MICE, RATS AND RABBITS HAVE BEEN CONDUCTED TO EVALUATE THE POTENTIAL EFFECTS PERCHLOROETHYLENE MAY HAVE ON REPRODUCTION AND OFFSPRING OF LABORATORY ANIMALS. PERCHLOROETHYLENE HAS BEEN FOUND TO BE EMBRYOTOXIC AND HAS CAUSED DELAYS IN THE DEVELOPMENT OF FETUSES. PERCHLOROETHYLENE HAS NOT CAUSED TERATOGENIC (BIRTH DEFECT) EFFECTS IN EXPERIMENTAL ANIMALS.

SECTION 5 EMPLOYEE PROTECTION

VENTILATION:

MAINTAIN WORKPLACE VAPOR CONCENTRATIONS AT OR BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 4C.

PROTECTIVE MEASURES FOR MAINTENANCE:

EXERCISE REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. STORE IN A COOL PLACE. CONCENTRATED VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE. DO NOT PRESSURE PRODUCT OUT OF VESSEL OR TRANSPORT CONTAINER WITH AIR.

RESPIRATORY PROTECTION:

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION 4C) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

SKIN PROTECTION:

FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED. WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON OR FULL-BODY SUIT WILL DEPEND ON OPERATION.

EYE PROTECTION:

USE SAFETY GLASSES. WHERE CONTACT WITH LIQUID IS LIKELY, CHEMICAL GOGGLES ARE RECOMMENDED BECAUSE EYE CONTACT WITH THIS MATERIAL MAY CAUSE PAIN, EVEN THOUGH IT IS UNLIKELY TO CAUSE INJURY. CONTACT LENSES SHOULD NOT BE WORN.

HYGIENE:

AVOID CONTACT WITH SKIN AND AVOID BREATHING VAPORS. DO NOT EAT, DRINK OR SMOKE IN WORK AREA. WASH HANDS PRIOR TO EATING, DRINKING, OR USING RESTROOM.

SECTION 6 EMERGENCY AND FIRST AID

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT:

REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION. SEE NOTE TO PHYSICIAN.

NOTE TO PHYSICIAN:

BECAUSE RAPID ABSORPTION MAY OCCUR THROUGH LUNGS IF ASPIRATED AND CAUSE SYSTEMIC EFFECTS, THE DECISION OF WHETHER TO INDUCE VOMITING OR NOT SHOULD BE MADE BY THE ATTENDING PHYSICIAN. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGEAL CONTROL. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING THE STOMACH. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. EXPOSURE MAY INCREASE "MYOCARDIAL IRRITABILITY". DO NOT ADMINISTER SYMPATHOMIMETIC DRUGS UNLESS ABSOLUTELY NECESSARY. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGEMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

SECTION 7 FIRE AND EXPLOSION HAZARDS

FLASH POINT: NONE

FLAMMABLE LIMITS: VOLUME IN AIR UPPER LIMITS: N/A
LOWER LIMITS: N/A

EXTINGUISHING MEDIA:

NON-FLAMMABLE

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

PRESSURE-DEMAND, SELF-CONTAINED RESPIRATORY PROTECTION SHOULD BE PROVIDED FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS WHERE THIS PRODUCT IS STORED. STORAGE CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH A WATER SPRAY, IN ORDER TO PREVENT PRESSURE BUILD-UP AND RUPTURE.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILD UP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

THIS PRODUCT IS NONFLAMMABLE AND NONEXPLOSIVE UNDER NORMAL CONDITIONS OF USE. AT HIGH TEMPERATURES, THIS PRODUCT DECOMPOSES TO GIVE OFF HYDROCHLORIC ACID GAS PLUS OTHER TOXIC AND IRRITATING GASSES SUCH AS PHOSGENE. IF STORAGE CONTAINERS ARE EXPOSED TO EXCESSIVE HEAT, OVER-PRESSURIZATION OF CONTAINERS CAN RESULT IN POSSSIBLE RUPTURE OF THE CONTAINER.

SECTION 8 REACTIVITY

STABILITY: THIS PRODUCT IS STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.

AVOID CONTACT WITH STRONG ALKALIES SUCH AS SODIUM HYDROXIDE AND CONTACT WITH STRONG MINERAL ACIDS SUCH AS SULFURIC, HYDROCHLORIC AND NITRIC ACIDS.

AVOID CONTACT WITH BARIUM, LITHIUM, MAGNESIUM, AND TITANIUM.

HAZARDOUS DECOMPOSITION PRODUCTS:

AT HIGH TEMPERATURES THIS PRODUCT DECOMPOSES TO GIVE OFF HYDROGEN CHLORIDE GAS AND SMALL QUANTITIES OF OTHER TOXIC AND IRRITATING VAPORS, SUCH AS PHOSGENE.

SECTION 9 SPILL AND DISPOSAL PRACTICES

SPILL:

EVACUATE THE AREA, VENTILATE, AND AVOID BREATHING VAPORS. DIKE AREA TO CONTAIN SPILL. CLEAN UP AREA (WEAR PROTECTIVE EQUIPMENT) BY MOPPING OR WITH ABSORBENT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. AVOID CONTAMINATION OF GROUND AND SURFACE WATERS. DO NOT FLUSH TO SEWER.

WASTE DISPOSAL:

RECOVERED LIQUIDS MAY BE SENT TO A LICENSED RECLAIMER OR INCINERATION FACILITY. CONTAMINATED MATERIAL MUST BE DISPOSED OF IN A PERMITTED HAZARDOUS WASTE MANAGEMENT FACILITY. CONSULT FEDERAL, STATE OR LOCAL DISPOSAL AUTHORITIES FOR APPROVED PROCEDURES.

SECTION 10 SPECIAL PRECAUTIONS

HANDLING AND STORAGE:

HANDLE WITH REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE.

STORE DRUMS IN A COOL PLACE, BUNG UP AND TIGHTLY CLOSED. STORAGE TANKS SHOULD BE ADEQUATELY VENTED FOR FILLING AND PRESSURE EQUALIZATION. VENTS FROM INDOOR TANKS SHOULD TERMINATE OUTDOORS.

USE IN VAPOR DEGREASERS: IF PRODUCT IS USED IN A VAPOR DEGREASER: DO NOT POUR COLD SOLVENT INTO BOILING SOLVENT. A VIOLENT ERUPTION MAY OCCUR SIMILAR TO THE REACTION OF COLD WATER POURED INTO HOT OIL OR GREASE. SEVERE BODY AND FACIAL BURNS AND OR FIRE MAY OCCUR. ADD COLD SOLVENT IN THE MORNING BEFORE DEGREASER START-UP. DO NOT EXCEED RECOMMENDED CLEAN-OUT TEMPERATURE OR OPERATE BELOW RECOMMENDED CLEAN-OUT SPECIFIC GRAVITY. SOLVENT DECOMPOSITION OR AUTO IGNITION OF COMBUSTIBLE CONTAMINANTS MAY OCCUR.

CLEAN OUT YOUR VAPOR DEGREASER WHEN THE TEMPERATURE OF THE BOILING SOLVENT RISES TO:

256 F

OR WHEN THE SPECIFC GRAVITY OF THE BOILING SOLVENT, COOLED TO 25C

DROPS TO:

1.440 25/25 C

AVOID USE WITH ALUMINUM: THIS PRODUCT SHOULD NOT BE PACKAGED IN ALUMINUM AEROSOL CANS OR WITH FINELY DIVIDED ALUMINUM OR ITS ALLOYS IN AN AEROSOL CAN. ALUMINUM IS NOT ACCEPTABLE MATERIAL OF CONSTRUCTION FOR PUMPS, MIXERS, FITTINGS, STORAGE TANKS FOR THIS PRODUCT OR FORMULATIONS.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED IS MADE. SINCE THE ACTUAL USE OF THIS PRODUCT BY OTHERS IS BEYOND THE CONTROL OF RHO-CHEM CORPORATION, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS OWN USE OF THIS PRODUCT.

DAY: (213) 928-3311
EMERGENCY 24 HR
CHEMTREC: 800-

TRADE NAME: Quenching Oil 15S

CHEMICAL FAMILY: Petroleum

CARCINOGENIC INGREDIENTS/OSHA/NTP/IARC: NONE

C.A.S. NO.: "MIXTURE"

TSCA INFORMATION: NOT CURRENTLY LISTED

SECTION II — HAZARDOUS INGREDIENTS

COMPONENTS	C.A.S. NOS.:	TLV/PEL PPM	TLV/PEL mg/m³	PERCENT BY WEIGHT/VOLUME
HYDRTRTD HVY PARAFFN DISTILLTE	64742-54-7		5	<50 U
CHEM TRTD MID PETROLEUM DSTLLT	64742-30-9		5	<50 U

THIS PRODUCT DEFINED AS NON-HAZARDOUS EXCEPT AS STATED ABOVE. DISCLOSURE OF INGREDIENTS AVAILIBLE TO PHYSICIAN OR NURSE IN EVENT OF MEDICAL EMERGENCY.

SECTION III — FIRE AND EXPLOSION HAZARD DATA

HAZARDOUS THERMAL DECOMPOSITION
CARBON MONOXIDE AND ASPHYXIANTS

FLAMMABLE LIMITS: LEL — UEL 0.9 - 7

FLASH POINT: ASTM D93 (PMCC) >110 °C (°F)

EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATERFOG

DOT INFORMATION: OIL, N.O.S.

UNUSUAL FIRE AND EXPLOSION HAZARDS: SLIGHTLY COMBUSTIBLE, WHEN HEATED ABOVE FLASH POINT WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN IN OPEN OR BE EXPLOSIVE IN CONFINED SPACES IF EXPOSED TO SOURCE OF IGNITION.

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT ENTER ANY ENCLOSED OR CONFINED AREA WITHOUT PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS.

SECTION IV — PHYSICAL DATA

BOILING RANGE: >200° C

SOLUBILITY: NEG

PH: N/D

VAPOR PRESSURE: <5 mm Hg @ 20 °C

APPEARANCE AND ODOR: BROWN, OILY LIQUID MILD KEROSENE ODOR

VAPOR DENSITY	EVAPORATION RATE	SPECIFIC GRAVITY	WEIGHT PER GALLON	% VOLATILE BY VOLUME
HEAVIER THAN AIR	LESS THAN ETHER	0.861	7.17	NIL

SECTION V — REACTIVITY DATA

INCOMPATIBILITY <MATERIALS TO AVOID>: STRONG OXIDIZING AGENTS

STABILITY: STABLE

CONDITIONS TO AVOID: DO NOT HEAT ABOVE FLASH POINT.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS

HAZARDOUS POLYMERIZATION: NONE

OCCUPATIONAL EXPOSURE LIMIT

TLV = 5mg/m³ AS OIL MIST

...ing Specialties Company

...OIL 15S

CODE NUMBER E6540

HEALTH 1 FIRE 1 REACTIVITY 0

PERSONAL PROTECTION (NFPA)

ROUTE OF EXPOSURE			
	N G	EXCEPT IN VERY SENSITIVE INDIVIDUALS	
	I N H	NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR ON SHORT TERM EXPOSURE	REMOVE FROM CONTAMINATED AREA. APPLY ARTIFICIAL RESPIRATION. IF UNCONCIOUS CONSULT PHYSICIAN
	E C Y O E N	NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION DEVELOPES CONSULT PHYSICIAN
	A S C C K O U I N T E	NOT NORMALLY EXPECTED TO CAUSE ANY ILL EFFECTS EXCEPT IN VERY SENSITIVE INDIVIDUALS	WASH WITH SOAP AND WATER. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.
	C S C H K O R I N O N I C	PROLONGED AND/OR REPEATED CONTACT MAY PRODUCE MILD SKIN IRRITATION AND INFLAMMATION. PERSONNEL WITH PRE-EXISTING SKIN DISORDER SHOULD AVOID CONTACT.	WEAR PROTECTIVE CLOTHING TO AVOID SKIN CONTACT. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.

<DOT> SECTION VII — SPILL OR LEAK PROCEDURES <EPA>

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: STOP FLOW. WIPE OR MOP UP OR ABSORB WITH DIATOMACEOUS EARTH OR OTHER INERT MATERIAL. STORE IN APPROPRIATE CONTAINER FOR DISPOSAL.

WASTE DISPOSAL METHOD:

IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORTATION INFORMATION: CONSULT 49 CFR PARTS 1-300 AND REFER TO SECTION III OF THIS MSDS FOR ADDITIONAL RECCOMMENDATIONS CONCERNING PLACARDING.

SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED

PROTECTIVE GLOVES: RECCOMMENDED

EYE PROTECTION: REQUIRED

OTHER PROTECTIVE EQUIPMENT: CHEMICALLY RESISTANT BOOTS AND APRONS RECCOMMENDED.

VENTILATION: SUFFICIENT TO MAINTAIN ATMOSPHERE BELOW TLV LIMIT

SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING OR STORING:
AVOID STORAGE NEAR OPEN FLAME OR OTHER SOURCES OF IGNITION.
EXCESSIVE MISTING MAY CAUSE SLIPPERY FLOORS. PROPER FOOTWEAR REQUIRED.

PERSONAL HYGIENE: WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

OTHER PRECAUTIONS: WASH OR TAKE SHOWER IF GENERAL CONTACT OCCURS. REMOVE OIL-SOAKED CLOTHING AND LAUNDER BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.

APPROVED BY: RICHARD J. EBERHARDT
LABORATORY MANAGER

DATE: 880805

ING OIL 15S

cating Specialties Company

CODE NUMBER E6540

HEALTH FIRE REACTIVITY

PERSONAL PROTECTION (NFPA)

DATE EFFECTIVE..... [redacted]
PRODUCT OR TRADE NAME..... 2-PROPANONE
CHEMICAL FAMILY..... KETONE
CHEMICAL NAME/SYNONYMS.... ACETONE

HAZARDOUS INGREDIENTS		CAS REGISTRATION #	HAZARD DATA ACGIH (TLV/TWA)	USHA (PEL/TWA)
ACETONE #	100%	67-64-1	750 PPM	1000 PPM

#ACUTE ORAL LD	ACUTE DERMAL LD50	ACUTE INHALATION LC50
9.75 G/KG (RAT)	20.0 G/KG (RABBIT)	15,000 PPM/4H (RAT)

SECTION 02 PHYSICAL DATA

BOILING POINT(760 MM HG).. 133 DEG. F
MELTING POINT..... -139 DEG. F
VAPOR PRESSURE(20 DEG C).. 186 @ 60 DEGR. F. (MM HG)
VAPOR DENSITY(AIR=1)..... 2.0
SOLUBILITY IN WATER..... COMPLETE
APPEARANCE & COLOR..... COLORLESS, MOBILE LIQUID. MILD ODOR.
SPECIFIC GRAVITY..... 0.8 (60 DEG F)
EVAPORATION RATE(BU.AC.=1) 5.6

SECTION 03 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... -15 DEG. F (TCC)
FLAMMABLE LIMITS (% BY VOL.) - LOWER - 2.5
HIGHER - 12.8
EXTINGUISHING MEDIA: USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO2.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:
DANGER EXTREMELY FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL AND ISOLATE. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS.

COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILD-UP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

SECTION 04 REACTIVITY DATA

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITIONS AND MATERIALS TO AVOID:

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED, IS MADE.

AVOID HEAT, SPARKS, FLAME AND CONTACT WITH [illegible]
PREVENT VAPOR ACCUMULATION.

HAZARDOUS DECOMPOSITION PRODUCTS:
CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

SECTION 05 SPILL, LEAK AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

DANGER EXTREMELY FLAMMABLE. ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING.

LARGE SPILLS ISOLATE THE HAZARD AREA AND DENY ENTRY TO UNNECESSARY PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF SOURCE OF LEAK ONLY IF SAFE TO DO SO. DIKE AND CONTAIN. WATER FOG MAY BE USEFUL IN SUPPRESSING VAPOR CLOUD; CONTAIN RUN-OFF. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; PLACE IN NON-LEAKING CONTAINERS FOR PROPER DISPOSAL. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE; DISPOSE OF FLUSH SOLUTIONS AS ABOVE.

SMALL SPILLS TAKE UP WITH AN ABSORBENT MATERIAL AND PLACE IN NON-LEAKING CONTAINERS; SEAL TIGHTLY FOR PROPER DISPOSAL.

WASTE DISPOSAL:
UNDER EPA-RCRA (40 CFR 261.22), IF ACETONE BECOMES A WASTE MATERIAL, IT WOULD BE HAZARDOUS WASTE. HAZARDOUS WASTE NUMBER U002. REFER TO LATEST EPA OR STATE REGULATIONS REGARDING PROPER DISPOSAL.

ENVIRONMENTAL HAZARDS:
EPA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT. UNDER EPA-CERCLA ("SUPERFUND") RELEASES TO AIR, LAND OR WATER WHICH EXCEED THE REPORTABLE QUANTITY MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

SECTION 06 HEALTH HAZARD DATA

ROUTES OF EXPOSURE:

EYE CONTACT: LIQUID IS SEVERELY IRRITATING TO THE EYES. HIGH VAPOR CONCENTRATIONS ARE ALSO IRRITATING.

SKIN CONTACT: LIQUID IS MILDLY IRRITATING TO THE SKIN. PROLONGED OR REPEATED LIQUID CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS.

INHALATION: HIGH VAPOR CONCENTRATIONS MAY PRODUCE CNS DEPRESSION.

INGESTION: MAY PRODUCE CNS DEPRESSION.

SIGNS AND SYMPTOMS: IRRITATION AS NOTED ABOVE. EARLY TO MODERATE CNS (CENTRAL NERVOUS SYSTEM) DEPRESSION MAY BE EVIDENCED BY GIDDINESS, HEADACHE, DIZZINESS AND NAUSEA; IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH MAY OCCUR.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR

AGGRAVATED MEDICAL CONDITIONS: PREEXISTING EYE AND SKIN DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO ACETONE.

SECTION 07 FIRST AID PROCEDURES AND PHYSICIAN NOTES

EMERGENCY AND FIRST AID PROCEDURES:

EYES: IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT: FLUSH SKIN WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION: DO NOT GIVE LIQUIDS IF VICTIM IS UNCONSCIOUS OR VERY DROWSY. OTHERWISE, GIVE NO MORE THAN 2 GLASSES OF WATER AND INDUCE VOMITING BY GIVING 30 CC (2 TABLESPOONS) SYRUP OF IPECAC. IF IPECAC IS UNAVAILABLE, GIVE 2 GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF THROAT. KEEP VICTIM'S HEAD BELOW HIPS WHILE VOMITING. GET MEDICAL ATTENTION.
NOTES TO PHYSICIAN: IF VICTIM IS A CHILD, GIVE NO MORE THAN 1 GLASS OF WATER AND 15 CC (1 TABLESPOON) SYRUP OF IPECAC. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS,

[redacted]

LOS ANGELES COUNTY FIRE DEPT/HHMD/SMU

CASE SYNOPSIS

Date: October 19, 1995

Log Number: 951668-377
Project Mgr: G Baker
SMU Priority: III
HW Generator: Yes
Generator #: 606073-101

Project: CONTINENTAL HEAT TREATING

Address: 10643 S. Norwalk Blvd, Santa Fe Springs, CA 90670

Contaminants: tetrachloroethylene and trichloroethylene

Depth to Ground Water: 35 - 65' **GW contamination:** unknown

Responsible Party: Continental Heat Treating
10643 S. Norwalk Blvd,
Santa Fe Springs, CA 90670
Phone #: (310)944-8808
Contact: James Stull

Consultant: Green Environmental, Inc.
6727 Greenleaf Ave,
Whittier, CA 90601
Phone #: (310)698-5338
Contact: Kent Green

Case Description:

On November 3, 1993, a complaint from the site operator of adjacent property to the north (lessee: Mobil Exploration) was received by this Department. The complaint alleged Continental Heat Treating was responsible for all or part of the chlorinated VOC contamination on Mobil's oil production lease property at 10607 S. Norwalk Blvd. The complaint was referred to Enforcement Unit for action on November 4, 1993. No enforcement activity by September 27, 1994, prompted a routine complaint inspection October 6, 1994.

Long-time employees all denied any improper disposal, leaking or spillage of vapor degreasing solvents anywhere on the property. Furthermore, the vapor degreaser had been moved from its original location in the shop. Eventually the old location of the degreaser was established. It appeared that this old location was close enough to the northern property line that leaks, sloppy

operations or spills could have migrated offsite despite employees' statements to the contrary. This inspection resulted in NOV #P14042, which included an order to provide a plan for corrective action at the old vapor degreaser location.

A single boring to a depth of 10' immediately adjacent but exterior to the concrete sump of the old industrial vapor degreaser was proposed. Three soil samples were taken as part of a preliminary assessment. The results of these samples are summarized as follows:

PCE AND TCE SOIL CONTAMINATION IN µg/Kg

BORING #	DEPTH (FT)	TRICHLORO-ETHYLENE (TCE)	TETRACHLORO-ETHYLENE (PCE)
B-1	6"	4759[3]	7514[3]
B-1	5'	21	290[3]
B-1	10'	66[3]	1855[3]

[3] exceeds 10XMCL; the Los Angeles RWQCB risk-based cleanup standards for TCE and PCE (both of which are 5µg/Kg) based on the VOC cleanup model.

The maximum TCE and PCE concentrations were 4759 and 7514 µg/Kg respectively and the means were 1615 and 3220 µg/Kg respectively.

No sample exceeded the HBSSL levels as carcinogens (PCE=8,500 and TCE=4,000 µg/Kg).

The Region IX USEPA residual PRG levels of PCE and TCE allowed (PCE(ind) = 25mg/Kg and PCE(res) = 7mg/Kg; TCE(ind) = 17mg/Kg and TCe(res) = 7.1mg/Kg) in industrial and residential soils were exceeded by PCE in the 6" sample only.

Applying the recent RWQCB model allowing the average attenuation factor of 255XMCL, three of the analyses would exceed the 1.275mg/Kg guideline concentration; PCE at 6" and 10', and TCE at 6".

The results of the preliminary assessment were sufficient documentation of a significant release to require a remedial investigation of the area. A letter was sent to Mr. Stull July 5, 1995, which directed him to determine the extent of the contamination and submit a site mitigation workplan. The workplan was prepared by Green Environmental and starts with a very limited scope investigation of the old vapor degreaser area.

Issues:

1. How much of the property needs to be evaluated in the RI?

2. Is it prudent to require a GW monitoring well at this juncture?

3. How much of the information (which the 10607 Norwalk B1 cleanup project has developed) could help economize this project?

4. Is it likely that the proposed borings and sampling protocol will define the vertical and lateral extent of the identified contamination?

Proposed Work Plan:

A work plan for the subsurface site investigation of the immediate area of the old vapor degreaser sump was received October 11, 1995.

A review of the submittal was completed and the following are missing or substantially defective for a complete property investigation. However, the workplan is directed only at the specified area in the immediate vicinity of the old vopor degreaser location.

1) A review of the historical use and existing information on the nature of the site mitigation problem.
2) Justification for the use of EPA method 8010 for sample analysis.
3) Justification for depth and array of borings and sampling.
4) Evaluation of public health and environmental concerns.
5) Investigation of hydrology and land use.
6) Justification for not boring to groundwater for the purpose of sampling for the known VOC contaminants.
7) A health and safety plan for the proposed investigation.
8) Justification for not submitting a work plan for at least one groundwater monitoring well, per RWQCB specifications, considering the underlying lithology of the site.

Referred to SMU 6/29/95
becomes SMU case # 377

COUN[redacted]
FIRE PREVENTI[redacted]ON BUREAU
HAZA[redacted]M

CASE UPDATE / PHONE LOG

Company / Case Name	CONTINENTAL HEAT TREATING	Log #

DATE	HMS INIT.	FINDINGS / REMARKS
10/25/95	GB	RETURN File to SE OFFICE
		- SMU is still providing oversite
		for haz material release - but should
		not interfere with routine activities

MCP • 8/91 • v 2.0

Page

or attach business card
Address
Phone( )

HAZARDOUS WASTE MANAGEMENT CONTROL PROGRAM
Los Angeles County Fire Department
Division of Forester & Fire Warden

PHL 606073 Code 1010 225 3

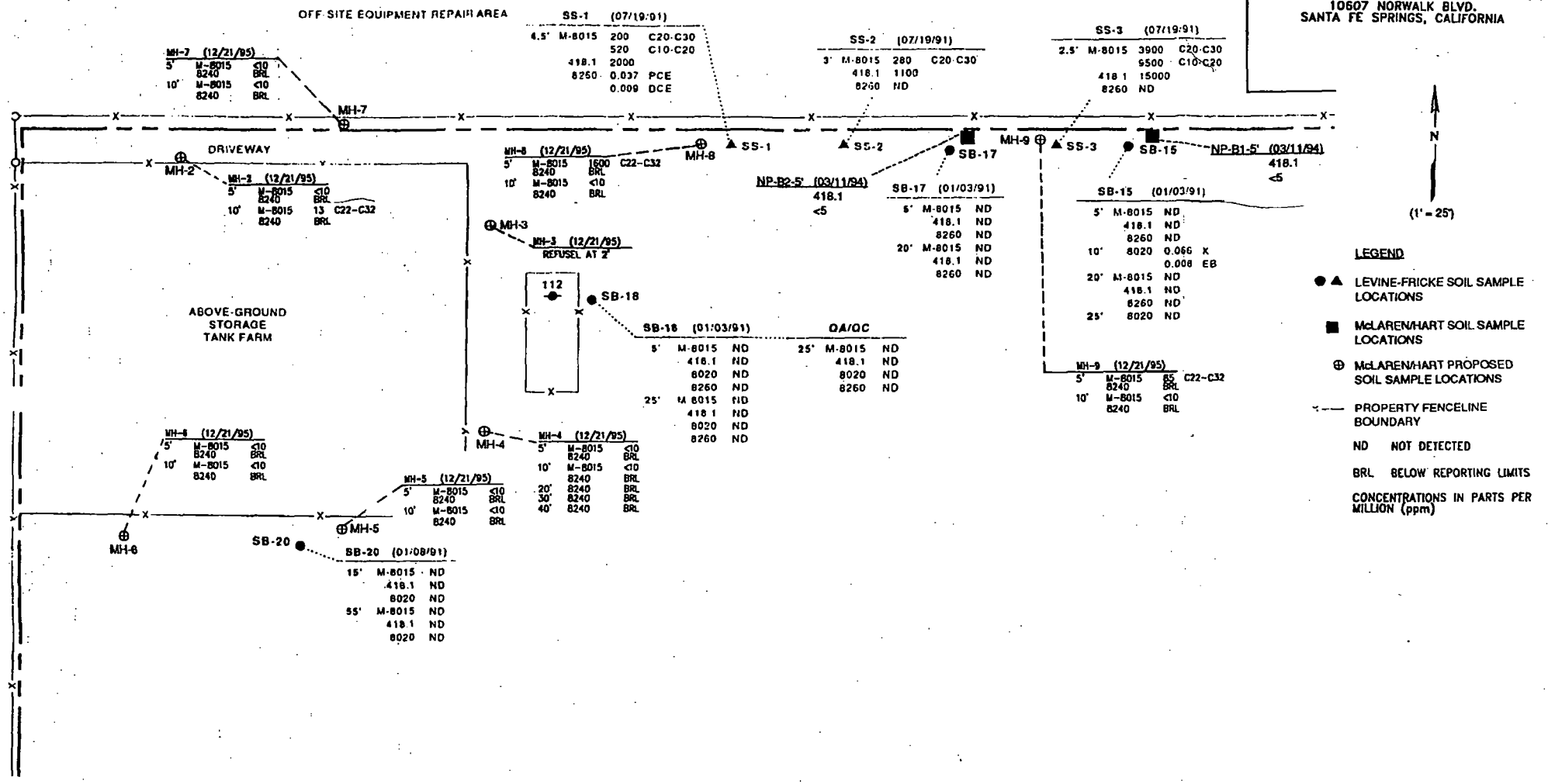
DATE:	INITIAL	FINDINGS/REMARKS
12/09/91	(S)	092 - Issued replacement license #153090 was deleted/cancelled by mistake
11/24/93	GB	copied file for R.G.
~~10~~ 9/27/94 ~~10/6/94~~		Lance Ralston enquires of the case and wants copy
10/6/94	GB	02 - inspection - part of the plant that the drawing show the original degreaser is different now - hasn't been a degreaser there (if ever) for at least 15 years - I ordered a limited evaluation of site in the vicinity of original degreaser installation only (TR)
11/28/94	GB	Req time extension to 1/20/95 for plan submission is having consultant problems granted
1/23/95	GB	- phone mtg - will schedule coming/sampling ASAP - approve sampling plan
1/30/95	GB	received sample plan - ok
2/6/95	GB	sampling done 8-30 - 10:00
3/1/95	GB	1' ~~PSRC~~ ~~TRI~~ ~~4502~~ TETRA 7514 conclusion 5' 21 PPB TRI 10' - TRI 66 ~~TETRA~~ 185

HAZARDOUS WASTE CO...

CASE NAME Continental Heat Treating

TE	TIME	INITIALS	REMARKS
7/19/89	pm	JO; GB	(1) Discharge of oil waste both onto asphalt top and onto soil (SW corner or rear yard)
			(2) Unlabelled barrels that Mr ~~[illegible]~~ Bastian indicated contained either PERC or waste oil
			(3) Incomplete manifests (no disposal facility signed copy available)
			(4) Leds + bungs missing on some oil waste barrels
			Has valid PHL
7-25-89		[illegible]	Manifest 89485618 7/10/89 for removal of oil/absorbant. Mr Bastian states this was from both the rear area (soil) and asphalt 4 drums removed. Ill violations abated. Facility has a continuing problem with mineral oil drag out on the asphalted area.

FIGURE 5
SOIL SAMPLE ANAYTICAL RESULTS
JALK FEE SITE
TANK BATTERY AND NORTHWEST PERIMETER
10607 NORWALK BLVD.
SANTA FE SPRINGS, CALIFORNIA



SOURCE: LEVINE-FRICKE, 199'
JALK FEE PROPERTY

McLaren Hart

GEOCHEMICAL INVESTIGATION OF:

NEAR SURFACE HYDROCARBON GAS ACCUMULATIONS IN SOIL

AT

10607 NORWALK BOULEVARD

[JALK FEE SITE]

CITY OF SANTA FE SPRINGS

BY

GeoScience Analytical, Inc.

January 23, 1991

Fleet E. Rust, Ph.D.

4454 Industrial Street
Simi Valley, CA 93063

(805) 526-6532

REGISTERED ENVIRONMENTAL ASSESSOR
FLEET E. RUST, Ph.D.
NO. 01680
EXP. JUNE 30, 1991
STATE OF CALIFORNIA

CONTENTS

1. Contractor's Disclaimer 5

2. Summary 7

3. Findings 9

4. Sampling Procedure 11

4.A. Probes . . . . . .

4.B. Boreholes . . . . . .

4.C. Monitoring Wells 12

5. Analyses 14

5.A. C1-C7 Hydrocarbons . . . . . .

5.B. CO2, N2 and O2 Gases . . . . . .

5.C. delta 13C on CH4 . . . . . .

6. Results and Discussion 15

7. Mitigation 21

8. Appendices 23

8.A. Figure 1: Site Plan 24

8.B. Sampling Site Coordinates 25

8.B.1. Table 1: Probes . . . . .

8.B.2. Table 2: Boreholes 27

8.B.3. Table 3: Monitoring Wells . . 28

8.C. C1-C4 Hydrocarbons in Soil Gas 29

8.C.1. Table 4: Probes . . . . .

8.C.2. Table 5: Boreholes 31

8.C.3. Table 6: Monitoring Wells . . 33

8.D. C5-C7 Hydrocarbons in Soil Gas 35

8.D.1. Table 7: Probes . . . . .

8.D.2. Table 8: Boreholes 37

8.D.3. Table 9: Monitoring Wells . . 39

8.E. CO2, O2 and N2 in Soil Gas 41

8.E.1. Table 10: Boreholes . . . .

8.E.2. Table 11: Monitoring Wells . . 43

8.F. Table 12: delta 13C on CH4 in Soil Gas . . 45

8.G. Figure 2: Methane Concentration Isopleths . 47

8.H. Figure 3: Monitoring Well Schematic . . 48

8.I. Table 13: Monitoring Well Depth Code . . 49

CONTRACTOR'S DISCLAIMER

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WITHOUT IN ANY WAY LIMITING OR QUALIFYING THE FOREGOING, BY REQUESTING OR RELYING UPON THIS REPORT, YOU WILL BE DEEMED TO ACKNOWLEDGE: (1) WE ARE NOT TO BE HELD LIABLE BY YOU, OR ANY PARTY CLAIMING THROUGH YOU, OR ANY PERSON INJURED UPON THE PROPERTY, FOR ANY LOSS, COST, LIABILITY, EXPENSE, ATTORNEYS FEES AND COSTS, OR CONSEQUENTIAL DAMAGES OCCURRING AS A RESULT OF ERRORS OR OMISSIONS ON THE PART OF THE STATE OF CALIFORNIA, THE CITY OF SANTA FE SPRINGS, THE REDEVELOPMENT AGENCY OF THE CITY OF SANTA FE SPRINGS, OR ANY OIL COMPANY, OR THEIR CONTRACTORS OR

SUBCONTRACTORS IN CAPPING THE OIL OR GAS WELL(S) IDENTIFIED IN THIS REPORT, OR: (2) AS A RESULT OF BREAKAGE OF OR SEEPAGE FROM UNDER THOSE OIL OR GAS WELL CAPS, OR AS A RESULT OF THE MIGRATION AND SUBSEQUENT EXPLOSION OF BIOGENIC GAS, AS A RESULT OF EARTH-SHAKING ASSOCIATED WITH EARTHQUAKES, EXPLOSIONS, EXCAVATION, DEMOLITION, SEISMIC VELOCITY TESTING, SOIL TESTING, WELL DRILLING OR THE LIKE; AND (3) WE HAVE DISCLOSED TO YOU THAT, IN OUR OPINION AS PROFESSIONAL GEOCHEMISTS, IT IS UNWISE TO BUILD STRUCTURES OR PAVED SURFACES OVER ABANDONED OIL OR GAS WELLS, GIVEN THE RISKS DESCRIBED IN (2) ABOVE, WITHOUT SATISFACTORY MITIGATION.

SUMMARY

GeoScience Analytical, Inc. (GSA) has conducted a geochemical evaluation on a property consisting of one (1) parcel known as the Jalk Fee Site or otherwise as 10607 Norwalk Blvd. in the City of Santa Fe Springs, CA. There are four (4) active wells on the site as well as an oil storage tank farm and an abandoned tank farm (tanks removed). Some drilling equipment is stored by one active well and a house trailer sits near the tank farm. The site terrain is flat with little vegetation. The property is fenced.

Soil gas samples were collected from thirty (30) locations over the site at a depth of four (4) feet. A further thirty (30) samples were collected from fifteen (15) boreholes at depths of 10 and 20 feet. Finally, ten (10) monitoring wells were installed with sampling intervals at ten (10) and twenty (20) feet. Samples were collected seven (7) days and fourteen (14) days after installation. Levine-Fricke, as Client, placed no constraints on the Contractor, nor did it suggest any interpretation of the data which were generated prior to completion of this report.

Dangerous (>20,000ppm [v/v]) and hazardous (1,000ppm - 20,000ppm [v/v]) concentrations of methane were found in the shallow soil gas (4') within and around the tank farm at the northwest corner of the parcel.

Soil borings and monitoring wells contained hazardous

gas at depths of ten (10) and twenty (20) feet in the eastern quarter of the parcel near Norwalk Blvd. Near the active tank farm, soil gas contained methane (10′) at a slightly hazardous concentration (1,700.0ppm [v/v]).

Subsurface contaminated soils were encountered on the eastern portion of the site and within the active tank farm. Bacterial action in the contaminated soil is generating the methane encountered in the boreholes and monitoring wells.

Remediation is required on the eastern portion of the property due to the methane and contaminated soils present. Remediation is also required for the contaminated surface soils present within the active tank farm at the northwest corner of the parcel.

FINDINGS

The parcel, located at 10607 Norwalk Blvd. (also known as the Jalk Fee Site), contains hazardous (1,000ppm - 20,000ppm [v/v]) and dangerous (>20,000ppm [v/v]) concentrations of methane in near surface soil gases (4') at two (2) locations, one within the active tank farm and one (1) at the northwest corner of the tank farm. Otherwise, near surface soils at the site contained only background concentrations of methane and other light hydrocarbons.

Soil borings (15) revealed the presence of hazardous and dangerous concentrations of methane in the soil gas at 10 and 20 feet in the eastern quarter of the property between an old abandoned tank farm on the south and an active well on the north. The methane is biogenic in origin with trace amounts of heavier biodegraded hydrocarbons present. The remaining 3/4 of the parcel to the west contained only background concentrations of methane and other light hydrocarbons in the soil gases at 10 and 20 feet.

Monitoring wells sampled at 7 and 14 days generally confirmed the results of the soil borings showing hazardous and dangerous concentrations of soil gas on the eastern quarter of the property. Concentrations were not reduced over time. The ten (10) foot interval in the monitoring well near the active tank farm at the west end of the parcel increased after fourteen (14) days to a methane concentration that was slightly hazardous

but the twenty (20) foot interval remained at background methane concentration levels.

Contaminated soils (probably from oil drilling and production activities) were encountered during drilling on the eastern quarter of the property. The high concentrations of methane found on the site are most likely the result of bacterial decomposition of the organic matter in the contaminated soils.

In order to mitigate the soil gas hazard posed by the high concentrations of methane, the contaminated soils will require remediation. Venting of the soil gases may not be practicable since they are not under appreciable pressure. If the active wells and tank farm are allowed to remain, provision will have to be made to shield any future buildings from them.

SAMPLING PROCEDURE

Probe Sampling

Shallow probe samples were collected from two (2) general locations: either open soil or soil paved over with asphalt. The asphalt paving was penetrated with a 1" diameter pointed steel rod that was hand driven with a 24 pound hammer. The soil, in either case, was penetrated to a depth of 48" with a 3/4" steel rod driven with a slide hammer. The steel rod, once it had reached a depth of 48", was carefully withdrawn and a steel reinforced nylon tube was immediately lowered to the bottom of the probe hole. A 20cc gas tight syringe was coupled to the uphole end of the nylon tubing and 10cc of gas withdrawn and discarded to flush the nylon tubing of air. Following this, 20cc of gas were withdrawn and collected by water displacement in a 20cc vacutainer. In this way there are no problems with atmospheric leakage or outgassing of the stopper into the vacutainer.

Borehole Sampling

The borehole (5" diameter) was drilled to a depth of twenty (20) feet using a gasoline powered, trailer mounted rig. The driller monitored depths using auger shaft markings and a tape. As soon as the hole was drilled to ten (10) feet, the auger shaft was removed and the hole covered, airtight, for ten (10) minutes. A section of 1/8" flexible tubing was lowered

into it to a depth of 9 1/2 feet. The lower end of the tubing was weighted to ensure it did not catch on the wall of the borehole.

A 60cc airtight syringe was attached to the uphole end of the tubing. Two syringes full of gas were withdrawn from the tubing and subsequently discarded, thus removing air contaminants from the tubing. Another 260cc were withdrawn and injected into a 250cc bottle sealed with a silicone rubber stopper. The bottle is filled with water and the gas sample is collected by displacement. There are no problems with atmospheric contamination or outgassing of the stopper using this method. The auger was then replaced in the borehole and the drilling continued to twenty (20) feet. Using the same procedure described above, another gas sample was collected at 19.5 feet.

Monitoring Well

The monitoring wells were augered to a depth of 20′ using a gasoline powered, trailer mounted hydraulic drill rig. The well was five (5) inches in diameter. The depth was monitored by the driller using markings on the auger shaft and a tape. Once the hole was completed and cleared of side wall cavings, the sampling apparatus, preconstructed at **GSA's** home facility, was installed (FIG. 3). The monitoring well apparatus is 22 feet in length and fabricated of 1 1/2" PVC (polyvinylchloride) tubing with 2′ sampling intervals at 9′ to 11′ and 18′ to 20′.

Each interval is isolated using inert rubber plugs placed within the PVC tube. The actual sampling interval is a one foot section of PVC tubing perforated with twenty-four 1/4" holes preceded and followed by six inches of unperforated tubing. Each sampling interval is connected to the surface with 1/8" nylon high pressure and color coded aircraft tubing (TAB. 13). Each of the inert rubber plugs has a hole drilled through its center to allow passage of the nylon tubing. All the holes were sealed with silicone rubber to prevent leaking between sampling intervals. Once the PVC pipe was in the hole it was backfilled in such a way that the sampling intervals were isolated. Each of the two foot sampling sections was surrounded by 3/4" gravel. Abutting the gravel, four (4) inch thick plugs of bentonite pellets (3/8"), which form a gas tight seal, were emplaced. Two (2) quarts of water were poured onto the bentonite pellets. A 50/50 mixture of washed sand and bentonite powder was placed between the wet bentonite plugs separating each of the sampling intervals. The PVC was left 2' above ground level.

Seven (7) days after emplacement of the monitoring wells, samples were collected. One further sampling took place at 14 days. The first 30cc from each depth were discarded. A volume of 260cc was then withdrawn using a syringe and stored in a 250cc bottle sealed with a silicone stopper. Samples were transported to **GSA's** laboratory for analyses.

ANALYSES

C1-C7 Hydrocarbons

A 1.0cc aliquot of gas was analyzed by FID gas chromatography for methane, ethane, ethylene, propane, propylene, iso-butane, n-butane, iso-pentane, n-pentane, iso-hexane, n-hexane, iso-heptane and n-heptane. Results are reported as parts-per-million (v/v) in the gas phase.

CO2, N2 and O2 Gases

A 0.5cc aliquot of gas was analyzed by thermal conductivity gas chromatography. Concentrations are reported as parts-per-million (v/v) in the gas phase.

Delta 13C on Methane

Methane was oxidized to CO2 over CuO and Pt in an oxygen atmosphere at 800 degrees C. Resultant water was removed with dry ice/acetone. The CO2 was analyzed for the isotopic ratio of 13C to 12C using a stable isotope mass spectrometer. Results are reported as parts-per-thousand relative to the PDB standard.

RESULTS AND DISCUSSION

GeoScience Analytical, Inc. (GSA) has conducted a geochemical evaluation of soil gas accumulations on a parcel known to be 10607 Norwalk Boulevard (Jalk Fee Site) in the City of Santa Fe Springs, CA. (FIG. 1). The property has four (4) active oil wells on it as well as an active and inactive tank farm (tanks removed). There is some drilling equipment stored next to one (1) well and a house trailer next to the tank farm that is used as an office and storage shed for the oil production activities on the site. The land is generally flat with no vegetation except some plantings along the south edge. It has been reported that as many as eight (8) sumps and one (1) landfill may have existed on the site.

Light hydrocarbon concentations typical of normal biological activity were found at shallow depth (4′) throughout the site (TAB. 1) except for two (2) locations: one (1) within the tank farm and one at its northwest corner (sites 27 and 28; FIG. 1). The soil gases were quite dry (>99.0% methane) implying a bacterial origin (Tab. 4). However, C5-C7 concentrations were higher than would be expected in purely bacterial gas and appeared to be biodegraded. According to workers in the area, the ground is periodically sprayed with oil to keep dust down. The soil gas hydrocarbons are most likely biogenic methane generated by bacterial degradation of the oil accompanied by traces of heavier hydrocarbons (C5-C7) that have been biodegraded (iso-alkanes present in greater

concentrations than n-alkanes: TAB. 7).

After the soil probe gases were taken, fifteen (15) boreholes were drilled across the site (FIG. 1; TAB. 2) and soil gases sampled at depths of ten (10) feet and twenty (20) feet. Soil borings were situated nearby the producing wells, within the confines of the suspected sumps and landfill and near or within the boundaries of the two (2) tank farms.

The soil borings on the western 3/4 of the site encountered only background or trace amounts of methane and other light hydrocarbons at depths of ten (10) and twenty (20) feet (TAB. 5). These soil borings were within the suspected landfill (SB15) near the south edge of the active tank farm (SB14), near Jalk 112 (SB13), Jalk 117 (SB11) and Jalk 113 (SB9), and near the centers of several of the suspected sumps (SB 12, 10, 7, 6, and 5). No staining or odors were observed on the cuttings from these soil borings.

On the eastern quarter of the property near Norwalk Blvd., hazardous and dangerous concentrations of methane were found in the soil gas at depths of ten (10) and twenty (20) feet. The methane occurred with ony trace amounts of C2 and C3 hydrocarbons present. Beginning with iso- and normal butane, concentrations increased rapidly to over 1,000 ppm (v/v) for hexane or heptane in some cases. The iso-alkanes were always present in greater amounts than the corresponding n-alkane for C5, C6 and C7 hydrocarbons (TAB. 8). These patterns were observed in soil gas samples recovered from SB 1, 2 and 3

located near the centers of three (3) suspected sump locations, and from SB's 4 and 8 located within the abandoned tank farm and near Jalk 111, an active well, respectively.

The observed relative abundance pattern of the C1-C7 hydrocarbons is typical of buried oil and/or oil production fluids found in sumps or oil spills isolated from the atmosphere that are subjected to bacterial degradation. The cuttings from the soil borings were observed to be stained and have an odor of diesel fuel. Measurements of the concentration of oxygen in the boreholes with high methane showed that it was moderately depleted compared with atmospheric values (TAB. 10). In an undisturbed system, the oxygen would be much more depleted; however, the boreholes are open to, and contaminated by, the atmosphere. Normal soils also contain gases depleted in oxygen but not to the same extent.

After the soil borings were completed, a series of monitoring wells were installed to sample undisturbed soil gases at depths of ten (10) and twenty (20) feet (TAB. 3). The monitoring wells on the western 3/4 of the property were very similar to the soil borings in their concentrations of low molecular weight hydrocarbons at the end of seven (7) days (TAB. 6). At the end of fourteen (14) days concentrations of methane had increased in MW1 and 2. The shallow interval in MW1 (10') contained slightly hazardous amounts (1,700ppm (v/v)) of methane reflecting the presence of slightly contaminated soil. There was no change at the twenty (20) foot interval. In MW2, methane

concentrations increased to a few hundred parts-per-million (v/v) at both intervals; a result of disturbances caused by admitting air to the bacterial systems at these depths.

The monitoring wells (MW 6-10) on the eastern quarter of the site contained hazardous to dangerous concentrations of methane in the soil gas at both the ten (10) and twenty (20) foot intervals, confirming the results of the soil borings in the same area (FIG. 2). The concentration of methane increased with depth while oxygen decreased and carbon dioxide increased (TAB. 11) to concentrations substantially greater than background or elsewhere on the parcel. These observations are indications of bacterial activity. The relative amounts of the C2-C7 hydrocarbon species (n-alkanes and iso-alkanes) showed a decrease in the C2 and C3 species with maximum concentrations beginning at butane (C4 compounds) and peaking in the hexane range (TAB. 9). The iso-alkanes are present in greater amounts than the normal or straight chain alkanes (except for the butanes). These patterns were observed in the soil gases recovered from the soil borings and are typical of buried oil spills or oil field wastes that are isolated from the atmosphere and are undergoing bacterial degradation.

Cuttings brought to the surface during the drilling of the monitoring wells were stained and had a noticeable petroleum or diesel related odor. The smell persisted to a depth of about twenty (20) feet in monitoring wells 6-10 at which depth a hard layer of silty clay and cobbles was encountered.

Concentrations of methane in monitoring wells 6-10 did not change appreciably over the two (2) weeks of monitoring indicating that there is a large reservoir of gas. There was no noticeable pressure on the gas in the wells and the cuttings showed that the deeper soils were porous sandy silts. Bacterial degradation is slowly generating gas which is spreading through the porous soils. It is not known to what extent the plume extends off-site to the north, east or south.

Isotopic values of delta ^{13}C on methane in borehole and monitoring well gases ranged from -30.8 to -44.8 relative to the PDB standard (TAB. 12). In general, heavier delta 13C values were observed with decreasing methane concentration. This is indicative of the secondary oxidation of methane to carbon dioxide and the preferential consumption of the lighter isotopic species. The isotopic values are consistent with petroleum based hydrocarbon contamination of the surficial soil which has been bacterially degraded under anaerobic conditions.

At present, with no development on site and no methane in the surface soils (3'-4'), there is no immediate danger. Bacterial degradation of the materials in place will continue until everything, including the methane, is converted to harmless gases (CO2 and water vapor). This may take several years assuming no fresh contamination. The practice of spraying oil to abate dust is not a serious hazard in connection with soil gases.

If construction is planned for the site, mitigation will

be required since construction will cap the soils preventing both the escape of methane from the surface and the penetration of oxygen which aerobic bacteria use in the degradation of methane and other hydrocarbons. Excavation might also cut into methane bearing soils.

MITIGATION

If development for the site is planned, mitigation will be required. Since there are active wells throughout the site and a small landfill present, methane detectors will be required for all ground floor rooms or each 10,000 square feet of ground floor space, whichever is smaller.

The presence of dangerous concentrations of methane in the soil gas, on the eastern quarter of the property, will require mitigation before development. One direct option is to employ an HDPE (high density polyethylene) barrier beneath all construction and install a monitoring/vent system both beneath and above the barrier.

A second alternative would require the removal of all soils generating methane and their replacement with fresh fill. Otherwise, the soils can be excavated and left on site with continual turning for atmospheric exposure to promote bacterial degradation and evaporation of volatile materials to acceptable levels. Once the soil is replaced, whether fresh or turned, monitoring wells will be required for at least six (6) months to ensure that methane does not reappear. Testing to determine the depth and extent of methane generating soils must be carried out first.

If it is determined that other contaminants beyond the scope of work for the present study are present in other than trace amounts, then additional mitigation will be required.

During grading operations, a qualified environmental assessor must be present to identify any unknown areas of contamination that might be present due to the historic oil production activities on site.

If no development is planned for the site, the current high concentrations of methane will cause no problems. If excavation deeper than four (4) feet are contemplated, portable methane detectors must be employed to guard against local concentrations of gas greater than the lower explosive limit [5.0% (v/v)]. All monitoring wells should be monitored quarterly and cumulative results submitted to the property owner and the City of Santa Fe Springs Fire Department.

Requirements imposed by the State of California Division of Oil and Gas should be followed relating to development over any abandoned oil wells.

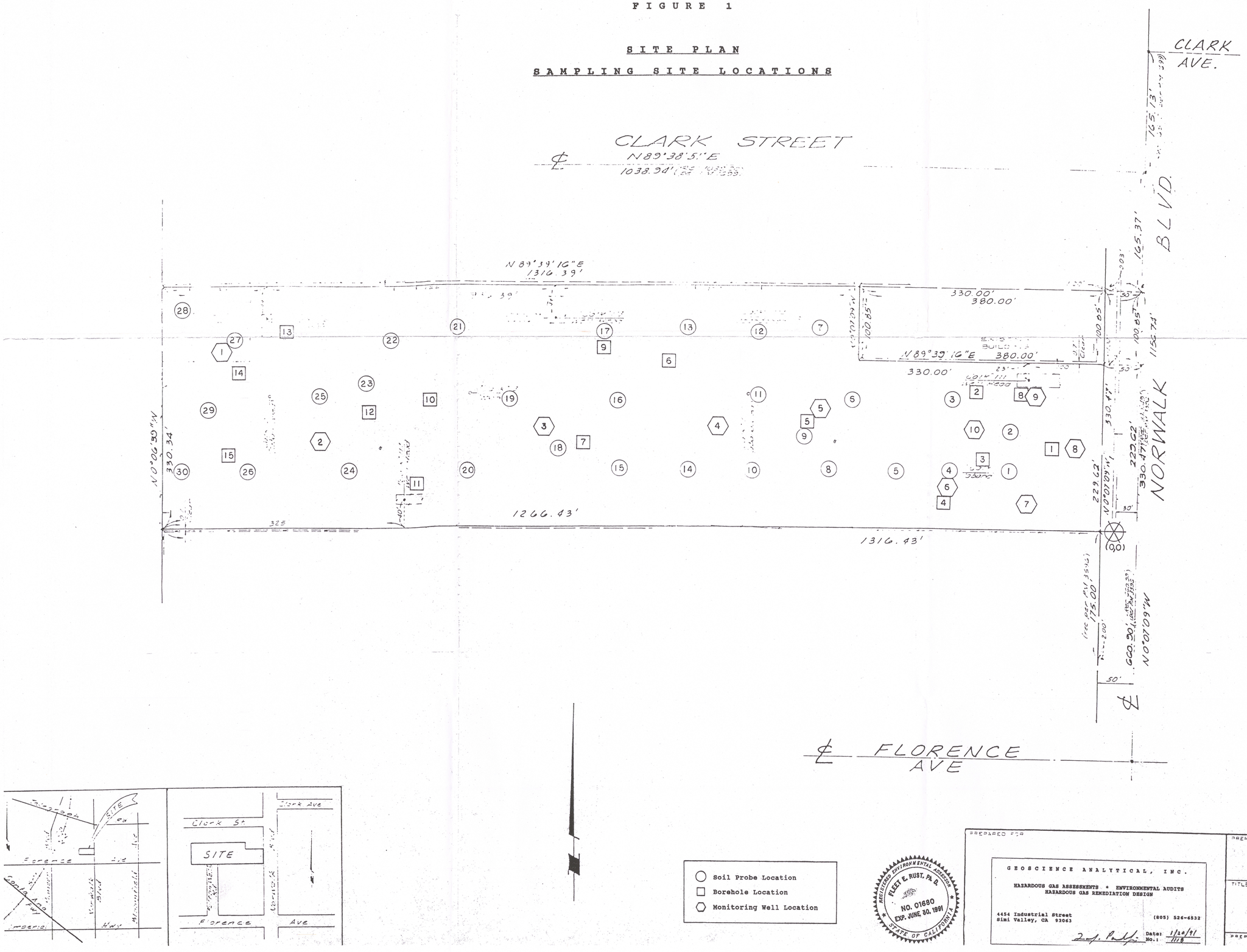
No additional mitigation is required on the subject property in the areas included under the scope of this project provided no sub-grade parking be made a part of the development plans.

APPENDICES

FIGURE 1

SITE PLAN

SAMPLING SITE LOCATIONS



GENERAL NOTES

1. LEGAL DESCRIPTION:
The South half of the North half o
Quarter of the Southwest Quarter o
Township 3 South, Range 11 West, S
Base and Meridan, in the City of S
County of Los Angeles, State of Ca

Excepting therefrom all oil, gas a
substances contained in said land a
that Grant Deed from John Russell
H. Agee, his wife, to General Petro
dated July 31, 1922 and Recorded Au
Book 1378, Page 75 of the Official
County.

Further excepting therefrom, that P
as conveyed in that Grant Deed from
Petroleum Corporation to Ernest R.
M. Karns, Husband and Wife, dated J
To Wit:

BEGINNING at the Northeast corner of
half of the North half of the Northe
the Southwest Quarter of Section 6;
along the Northerly line of said Sou
North Half of the Northeast Quarter
Quarter 380.0 feet; thence Southerl
to the Easterly line of said South H
Half of the Northeast Quarter of the
[illegible] feet; thence Easterl
to the Northerly line of said South
North Half of the Northeast Quarter
Quarter, 380.0 feet; thence Northerly
Easterly line of said South Half of
of the Northeast Quarter of the South
100.85 feet to the POINT OF BEGINNING

2. TITLE REPORT:
Title Report # 8800474 dated May 5, 1
Continental Land Title Company.

3. TITLE REPORT EXCEPTIONS:
Item A - Taxes.
Item B - Taxes.
Item C - Supplemental Taxes.
Item # 1 - Easement for roads, railro
and water courses.
Item # 2 - Lease.
Item # 3 - Easement for street, public
and municipal purposes.
Item # 4 - Rights of public within Norw
Item # 5 - Easements not disclosed by
Item # 6 - Water rights.

4. DEDICATION:
None.

5. AREA:
Net Area - 385,141 Sq. Ft. = 8.842 Acre

6. UTILITIES:
This map represents a Boundary and Part
Topographic Survey. Active well heads
shown. Underground utilities have not

7. ABANDONED OIL WELLS:
The abandoned oil wells shown on this m
plotted per California State Mining Bur
"Notice of Intention To Drill New Well"
by State of California, Department of
Division [illegible], 245 West Broad
[illegible] 92302-4455, Phone
[illegible] Mark D. Johnson.

Description	Location
"Jalk" 1	251 feet South of North line and 151 feet West of line of Norwalk Blvd.
"Jalk" 2	150 feet South and 144 fe of the Northwest Corner
"Jalk" 3	150 feet South and 411 fe of the Northwest corner
"Jalk" 4	150 feet South of North line and 530 feet West of line of Norwalk Blvd.
"Jalk" 114	45 feet South of North pr line and 459 feet West of line of Norwalk Blvd.

8. BASIS OF BEARINGS:
The Bearing of North 0° 07' 09" West fo
line of Norwalk Boulevard as per Parcel
1596 filed in Book 70, Pages 98 and 99 of
Maps.

9. NOTE TO CONTRACTOR:
The Contractor is required to take due pr
measures to protect the utilities or str
shown and any other utilities or structur
site. It shall be the Contractor's respo
to notify the owners of the utilities or
concerned before starting work.

The Contractor agrees that he shall assu
complete responsibility for job site con
during the course of construction of the
including safety of all persons and prope
this requirement shall apply continuously
be limited to normal working hours; and t
Contractor shall defend, indemnify and hol
Owner and the Engineer harmless from any s
liability real or alleged, in connection
performance of work on the Project, except
liability arising from the sole negligence
Owner or the Engineer.

REGISTERED ENVIRONMENTAL ASSESSOR
FLEET E. RUST, Ph.D.
NO. 01680
EXP. JUNE 30, 1991
STATE OF CALIFORNIA

PREPARED FOR

GEOSCIENCE ANALYTICAL, INC.

HAZARDOUS GAS ASSESSMENTS • ENVIRONMENTAL AUDITS
HAZARDOUS GAS REMEDIATION DESIGN

4454 Industrial Street
Simi Valley, CA 93063

(805) 526-6532

Date: 1/20/91
No.: 1118

PREPARED BY

TITLE

Vice President- Operations

PREPARED UNDER THE SUPERVISION OF

TABLE 1

SAMPLING SITE COORDINATES

PROBES

Probe No.	X (ft)	Y (ft)
1	125′ W	75′ N
2	125′ W	130′ N
3	205′ W	175′ N
4	210′ W	75′ N
5	280′ W	75′ N
6	340′ W	175′ N
7	390′ W	275′ N
8	390′ W	75′ N
9	425′ W	125′ N
10	500′ W	75′ N
11	500′ W	180′ N
12	490′ W	275′ N
13	590′ W	275′ N
14	590′ W	75′ N
15	680′ W	75′ N
16	675′ W	175′ N
17	700′ W	275′ N
18	760′ W	110′ N
19	825′ W	180′ N
20	890′ W	75′ N
21	900′ W	275′ N

Probe No.	X (ft)	Y (ft)
22	990′ W	260′ N
23	1025′ W	200′ N
24	1050′ W	75′ N
25	1090′ W	180′ N
26	1190′ W	75′ N
27	1200′ W	260′ N
28	1275′ W	300′ N
29	1240′ W	160′ N
30	1275′ W	75′ N
31	b l a n k	

TABLE 2

SAMPLING SITE COORDINATES

BOREHOLES

Borehole No.	X (ft)	Y (ft)
1	90′ W	112′ N
2	191′ W	200′ N
3	181′ W	81′ N
4	233′ W	34′ N
5	419′ W	129′ N
6	613′ W	226′ N
7	727′ W	116′ N
8	104′ W	194′ N
9	702′ W	254′ N
10	935′ W	172′ N
11	967′ W	58′ N
12	1020′ W	160′ N
13	1131′ W	273′ N
14	1193′ W	218′ N
15	1214′ W	100′ N

TABLE 3

SAMPLING SITE COORDINATES

MONITORING WELLS

Monitoring Well No.	X (ft)	Y (ft)
1	1217′ W	239′ N
2	1088′ W	120′ N
3	779′ W	135′ N
4	548′ W	138′ N
5	408′ W	161′ N
6	225′ W	40′ N
7	120′ W	33′ N
8	53′ W	115′ N
9	111′ W	190′ N
10	190′ W	140′ N

TABLE 4

C1-C4 HYDROCARBONS IN SOIL PROBE GAS (ppm)

Probe No.	C1	C2	C2:	C3	C3:	iso-C4	n-C4
1	2.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2	6.4	0.1	0.1	n.d.	n.d.	n.d.	n.d.
3	4.3	0.2	0.1	n.d.	0.2	n.d.	0.3
4	6.3	0.4	0.6	0.2	0.4	n.d.	0.3
5	4.1	n.d.	n.d.	n.d.	n.d.	n.d.	0.2
6	5.7	0.4	0.1	n.d.	n.d.	n.d.	n.d.
7	2.3	n.d.	n.d.	n.d.	n.d.	n.d.	0.3
8	10.2	0.6	0.6	0.2	0.3	0.1	0.1
9	4.5	0.2	n.d.	0.1	n.d.	0.1	0.3
10	4.6	0.1	n.d.	0.1	n.d.	n.d.	n.d.
11	4.9	0.3	0.2	0.1	0.2	n.d.	0.1
12	4.2	0.4	0.5	0.2	0.3	n.d.	0.2
13	6.2	0.9	1.0	0.5	0.7	0.1	0.2
14	4.9	0.2	0.2	0.1	n.d.	0.1	0.5
15	7.3	0.6	0.8	0.3	0.4	0.1	0.1
16	4.6	0.1	n.d.	n.d.	n.d.	n.d.	n.d.
17	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
18	3.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
19	2.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
20	3.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
21	3.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
22	4.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
23	5.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Probe No.	C1	C2	C2:	C3	C3:	iso-C4	n-C4
24	4.6	0.1	n.d.	0.1	n.d.	n.d.	0.1
25	5.6	0.1	0.1	n.d.	n.d.	n.d.	n.d.
26	5.1	0.1	n.d.	n.d.	n.d.	n.d.	n.d.
27	1,351.0	0.2	0.2	0.2	0.1	1.0	1.3
28	25,289.0	0.1	0.3	0.1	0.2	n.d.	n.d.
29	9.8	0.4	n.d.	0.3	n.d.	n.d.	n.d.
30	4.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
31	2.3	0.1	n.d.	n.d.	n.d.	n.d.	n.d.

TABLE 5

C1-C4 HYDROCARBONS IN BOREHOLE GAS (ppm)

Borehole No.	Depth (ft)	C1	C2	C2:	C3	C3:	iso-C4	n-C4
1	10	97.1	0.3	0.2	0.2	0.1	0.9	0.4
	20	26,111.0	2.9	0.8	12.4	0.5	25.3	71.4
2	10	9.2	0.4	0.3	0.2	0.2	0.1	0.1
	20	14,910.0	2.0	0.3	2.0	0.1	4.1	3.7
3	10	1,285.0	0.5	0.3	0.6	n.d.	0.9	2.7
	20	42,663.0	7.9	1.4	19.5	0.2	41.9	125.0
4	10	1,993.0	1.0	0.7	0.9	0.2	1.5	5.7
	20	30,507.0	3.5	3.8	8.7	n.d.	19.3	68.4
5	10	14.3	1.8	n.d.	0.1	n.d.	n.d.	0.1
	20	11.0	0.4	0.3	0.2	0.2	4.9	0.2
6	10	7.1	3.2	0.3	0.1	0.1	0.1	0.2
	20	4.6	0.2	0.2	0.1	n.d.	n.d.	0.1
7	10	4.4	0.1	n.d.	n.d.	n.d.	n.d.	n.d.
	20	9.7	0.2	n.d.	0.9	n.d.	5.0	3.9
8	10	18,237.0	0.1	0.2	7.3	0.1	26.5	41.1
	20	131,650.0	6.2	n.d.	43.3	n.d.	136.0	276.0
9	10	6.0	0.2	0.2	0.1	n.d.	0.3	0.1
	20	3.5	0.2	0.2	0.1	n.d.	1.2	0.3

Borehole No.	Depth (ft)	C1	C2	C2:	C3	C3:	iso-C4	n-C4
10	10	4.6	0.2	n.d.	0.1	n.d.	0.7	0.2
	20	4.1	0.4	0.1	9.3	n.d.	9.4	10.9
11	10	6.0	3.4	0.3	8.1	0.1	17.8	28.4
	20	3.7	0.3	0.2	0.1	n.d.	0.9	0.3
12	10	3.9	0.2	n.d	n.d.	n.d.	n.d.	n.d.
	20	4.3	0.5	0.2	4.1	0.1	20.5	12.8
13	10	5.1	0.3	0.1	0.1	n.d.	n.d.	n.d.
	20	6.3	0.9	0.4	0.3	0.1	n.d.	0.1
14	10	5.8	0.4	0.2	0.2	n.d.	0.9	0.3
	20	4.8	0.6	0.4	0.2	0.2	0.3	0.2
15	10	5.9	1.5	0.1	1.9	n.d.	0.2	1.1
	20	4.3	0.6	0.2	1.0	n.d.	0.5	0.8

TABLE 6

C1-C4 HYDROCARBONS IN MONITORING WELL GAS (ppm)

Monitoring Well No.	Depth (ft)	Time (days)	C1	C2	C2:	C3	C3:	iso-C4	n-C4
1	10	7	2.8	0.1	0.2	n.d.	n.d.	n.d.	0.2
		14	1,662.0	916.0	0.2	542.0	n.d.	61.0	184.0
	20	7	4.6	n.d.	n.d.	n.d.	n.d.	0.3	2.8
		14	11.1	0.2	0.1	0.1	n.d.	n.d.	0.5
2	10	7	1.6	0.4	n.d.	2.8	n.d.	2.0	2.4
		14	159.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	7	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	321.0	n.d.	0.1	n.d.	n.d.	n.d.	n.d.
3	10	7	1.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	6.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	7	142.0	4.3	0.1	0.3	n.d.	0.6	n.d.
		14	18.6	n.d.	n.d.	n.d.	n.d.	n.d.	0.1
4	10	7	1.3	0.1	n.d.	1.0	n.d.	0.6	0.8
		14	29.5	n.d.	n.d.	n.d.	n.d.	n.d.	0.1
	20	7	2.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	6.1	n.d.	n.d.	n.d.	n.d.	n.d.	0.2
5	10	7	1.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	19.4	n.d.	n.d.	n.d.	n.d.	n.d.	0.3
	20	7	2.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	7.6	n.d.	n.d.	n.d.	n.d.	n.d.	0.1
6	10	7	11,048.0	5.4	3.1	7.2	0.6	15.1	35.7
		14	18,932.0	5.0	3.2	7.0	n.d.	16.5	32.7
	20	7	91,238.0	9.8	5.8	30.5	0.2	72.0	247.0
		14	95,443.0	10.5	6.0	30.9	n.d.	74.2	247.0

Monitoring Well No.	Depth (ft)	Time (days)	C1	C2	C2:	C3	C3:	iso-C4	n-C4
7	10	7	21.1	n.d.	n.d.	n.d.	n.d.	0.2	0.2
		14	1,062.0	0.1	n.d.	0.4	n.d.	1.5	1.8
	20	7	102,510.0	7.3	n.d.	45.1	n.d.	102.0	353.0
		14	107,480.0	8.2	n.d.	45.3	n.d.	109.0	357.0
8	10	7	24,737.0	1.8	n.d.	12.0	n.d.	41.5	80.1
		14	31,825.0	1.4	n.d.	11.8	n.d.	39.7	52.2
	20	7	113,830.0	8.5	n.d.	63.8	n.d.	177.0	494.0
		14	122,130.0	10.4	n.d.	70.3	n.d.	192.0	558.0
9	10	7	78,085.0	4.9	n.d.	31.9	n.d.	122.0	148.0
		14	214,152.0	209.0	n.d.	245.0	n.d.	214.0	324.0
	20	7	250,050.0	16.0	n.d.	109.0	n.d.	339.0	712.0
		14	282,820.0	182.0	n.d.	110.0	n.d.	363.0	837.0
10	10	7	4,701.0	199.0	n.d.	257.0	n.d.	46.4	106.0
		14	9,204.0	1.4	n.d.	4.7	n.d.	11.8	26.4
	20	7	81,802.0	12.2	n.d.	41.5	n.d.	84.6	238.0
		14	78,373.0	12.3	n.d.	38.9	n.d.	72.3	212.0

TABLE 7

C5-C7 HYDROCARBONS IN SOIL PROBE GAS (ppm)

Probe No.	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
10	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
11	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
12	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
13	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
14	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
15	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
16	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
18	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
19	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
20	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
21	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
22	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
23	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Probe No.	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
24	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
25	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
26	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
27	2.9	n.d.	20.4	n.d.	32.7	n.d.
28	3.3	0.4	75.0	n.d.	n.d.	n.d.
29	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
30	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
31	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

TABLE 8

C5-C7 HYDROCARBONS IN BOREHOLE GAS (ppm)

Site No.	Depth (ft)	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
1	10	2.8	0.2	3.6	0.1	2.5	0.4
	20	266.0	18.5	473.0	n.d.	189.0	n.d.
2	10	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	28.4	n.d.	46.9	n.d.	46.2	n.d.
3	10	12.0	4.1	30.8	4.3	19.2	2.5
	20	559.0	145.0	1,040.0	60.2	952.0	109.0
4	10	31.4	12.9	261.0	29.1	1,287.0	233.0
	20	346.5	137.0	1,036.0	210.0	1,689.0	919.0
5	10	0.3	0.1	2.0	0.3	6.5	5.6
	20	6.0	n.d.	4.9	n.d.	3.8	1.1
6	10	0.2	n.d.	n.d.	n.d.	n.d.	n.d.
	20	0.2	n.d.	n.d.	n.d.	n.d.	n.d.
7	10	n.d.	n.d.	0.1	n.d.	0.8	0.9
	20	8.5	1.2	3.4	n.d.	1.7	n.d.
8	10	233.0	n.d.	292.0	n.d.	217.0	n.d.
	20	1,263.0	n.d.	2,387.0	n.d.	3,585.0	1,576.0
9	10	0.8	n.d.	1.5	4.1	1.4	n.d.
	20	2.5	n.d.	1.5	n.d.	0.1	n.d.

Site No.	Depth (ft)	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
10	10	2.3	n.d.	2.0	n.d.	0.5	n.d.
	20	13.6	n.d.	2.7	0.4	0.2	n.d.
11	10	44.7	14.2	38.0	5.3	26.5	n.d.
	20	1.7	n.d.	n.d.	n.d.	n.d.	n.d.
12	10	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	21.6	2.0	6.7	n.d.	1.7	n.d.
13	10	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
14	10	1.6	n.d.	1.3	n.d.	1.4	n.d.
	20	0.8	n.d.	0.9	n.d.	0.7	n.d.
15	10	0.6	n.d.	0.3	n.d.	n.d.	n.d.
	20	0.5	0.2	n.d.	n.d.	n.d.	n.d.

TABLE 9

C5-C7 HYDROCARBONS IN MONITORING WELL GAS (ppm)

Monitoring Well No.	Depth (ft)	Time (days)	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
1	10	7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	41.9	45.6	26.4	8.9	8.1	1.5
	20	7	2.3	n.d.	n.d.	n.d.	n.d.	n.d.
		14	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2	10	7	3.3	0.8	3.8	0.3	3.4	n.d.
		14	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	20	7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3	10	7	0.3	n.d.	1.5	0.3	3.3	2.8
		14	0.1	n.d.	0.7	n.d.	0.8	n.d.
	20	7	0.5	n.d.	n.d.	n.d.	n.d.	n.d.
		14	0.3	n.d.	1.1	n.d.	2.2	n.d.
4	10	7	1.1	0.3	3.0	0.3	3.1	n.d.
		14	0.4	0.2	1.7	0.5	2.5	n.d.
	20	7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	0.4	0.3	1.3	1.0	2.0	n.d.
5	10	7	0.3	n.d.	1.5	0.2	2.9	0.6
		14	0.6	0.2	2.6	0.7	3.6	1.2
	20	7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
		14	0.4	0.3	3.0	1.6	2.7	n.d.
6	10	7	126.0	36.3	194.0	15.4	50.5	7.8
		14	157.0	36.9	121.0	14.1	50.0	4.6
	20	7	1,311.0	433.0	3,100.0	460.0	4,332.0	866.0
		14	1,344.0	445.0	4,404.0	472.0	3,338.0	464.0

Monitoring Well No.	Depth (ft)	Time (days)	iso-C5	n-C5	iso-C6	n-C6	iso-C7	n-C7
7	10	7	2.6	0.5	10.5	0.9	13.6	1.9
		14	15.0	1.0	23.8	n.d.	11.3	n.d.
	20	7	1,988.0	231.0	5,220.0	n.d.	2,616.0	n.d.
		14	2,245.0	227.0	6,127.0	n.d.	2,681.0	n.d.
8	10	7	428.0	27.4	723.0	n.d.	366.0	n.d.
		14	229.0	n.d.	119.0	n.d.	16.7	n.d.
	20	7	2,390.0	221.0	6,008.0	n.d.	3,603.0	n.d.
		14	2,908.0	289.0	6,114.0	n.d.	5,474.0	34.3
9	10	7	1,096.0	n.d.	1,294.0	n.d.	887.0	n.d.
		14	1,929.0	n.d.	2,893.0	n.d.	1,926.0	n.d.
	20	7	3,608.0	n.d.	8,470.0	n.d.	7,180.0	n.d.
		14	5,077.0	n.d.	15,764.0	n.d.	14,231.0	n.d.
10	10	7	165.0	22.2	258.0	n.d.	192.0	n.d.
		14	155.0	13.2	322.0	n.d.	195.0	n.d.
	20	7	1,070.0	96.3	2,060.0	n.d.	1,217.0	n.d.
		14	1,002.0	93.8	1,989.0	n.d.	1,017.0	n.d.

TABLE 10

CO2, O2 & N2 IN BOREHOLE GAS (ppm)

Site No.	Depth (ft)	CO2	O2	N2	N2/O2
1	10	31,534.0	173,530.0	755,040.0	4.4
	20	48,332.0	140,850.0	740,830.0	5.3
2	10	29,751.0	187,600.0	743,440.0	4.0
	20	79,456.0	120,210.0	757,840.0	6.3
3	10	24,126.0	191,480.0	735,810.0	3.8
	20	95,239.0	49,309.0	774,700.0	15.7
4	10	27,084.0	150,210.0	764,680.0	5.1
	20	66,853.0	74,049.0	779,080.0	10.5
5	10	10,542.0	197,830.0	747,350.0	3.8
	20	36,356.0	165,112.0	752,826.0	4.6
6	10	9,351.0	191,420.0	718,800.0	3.8
	20	30,829.0	177,170.0	755,190.0	4.3
7	10	5,751.0	201,170.0	740,560.0	3.7
	20	24,748.0	177,560.0	747,840.0	4.2
8	10	58,638.0	170,210.0	695,740.0	4.1
	20	101,460.0	106,808.0	654,396.0	6.1
9	10	8,917.0	206,750.0	774,820.0	3.7
	20	52,853.0	149,970.0	789,440.0	5.3

Site No.	Depth (ft)	CO2	O2	N2	N2/O2
10	10	5,055.0	195,950.0	742,575.0	3.8
	20	23,018.0	178,260.0	742,120.0	4.2
11	10	6,336.0	205,290.0	770,890.0	3.8
	20	27,375.0	175,660.0	785,745.0	4.5
12	10	8,052.0	211,640.0	788,560.0	3.7
	20	42,202.0	152,800.0	783,450.0	5.1
13	10	22,210.0	188,410.0	755,800.0	4.0
	20	74,817.0	86,625.0	812,600.0	9.4
14	10	22,315.0	184,660.0	740,490.0	4.0
	20	50,207.0	118,540.0	792,430.0	6.7
15	10	22,580.0	188,510.0	753,380.0	4.0
	20	62,398.0	119,400.0	783,220.0	6.6

TABLE 11

CO2, O2 AND N2 IN MONITORING WELL GAS (PPM)

Monitoring Well No.	Depth (ft)	Time (days)	CO2	O2	N2	N2/O2
1	10	7	21,735.0	163,040.0	781,480.0	4.8
		14	22,902.0	165,060.0	786,570.0	4.8
	20	7	89,328.0	34,982.0	852,660.0	24.4
		14	74,745.0	35,403.0	876,900.0	24.8
2	10	7	23,173.0	172,670.0	781,600.0	4.5
		14	30,089.0	156,780.0	781,830.0	5.0
	20	7	40,799.0	146,860.0	822,730.0	5.6
		14	35,970.0	141,880.0	791,270.0	5.6
3	10	7	29,101.0	180,120.0	779,030.0	4.3
		14	21,054.0	174,470.0	779,420.0	4.5
	20	7	51,403.0	153,750.0	778,610.0	5.1
		14	27,073.0	165,230.0	809,740.0	4.9
4	10	7	55,651.0	154,930.0	764,210.0	4.9
		14	36,071.0	150,090.0	815,550.0	5.4
	20	7	57,585.0	137,440.0	783,170.0	5.7
		14	36,695.0	143,410.0	801,620.0	5.6
5	10	7	45,946.0	160,410.0	758,370.0	4.7
		14	28,762.0	161,120.0	806,160.0	5.0
	20	7	68,695.0	103,650.0	783,690.0	7.6
		14	53,583.0	113,290.0	803,530.0	7.1
6	10	7	72,867.0	89,153.0	788,890.0	8.8
		14	84,523.0	76,830.0	790,150.0	10.3
	20	7	109,050.0	13,813.0	730,200.0	52.9
		14	103,140.0	15,327.0	749,710.0	48.9

Monitoring Well No.	Depth (ft)	Time (days)	CO2	O2	N2	N2/O2
7	10	7	60,174.0	120,740.0	769,590.0	6.4
		14	53,821.0	115,980.0	800,480.0	6.9
	20	7	138,150.0	12,427.0	690,330.0	55.6
		14	135,440.0	13,623.0	698,994.0	51.3
8	10	7	109,650.0	19,267.0	789,500.0	41.0
		14	101,480.0	26,908.0	802,820.0	29.8
	20	7	121,410.0	20,940.0	753,180.0	36.0
		14	130,080.0	13,950.0	682,210.0	48.9
9	10	7	131,780.0	14,825.0	760,280.0	51.3
		14	153,150.0	13,443.0	637,700.0	47.4
	20	7	166,720.0	13,352.0	498,470.0	37.3
		14	173,440.0	10,695.0	465,040.0	43.5
10	10	7	108,200.0	12,437.0	885,520.0	71.2
		14	110,420.0	16,270.0	821,160.0	50.5
	20	7	152,280.0	16,160.0	740,160.0	45.8
		14	144,380.0	14,131.0	742,100.0	52.5

TABLE 12

DELTA 13C ON METHANE IN BOREHOLE AND MONITORING WELL GAS

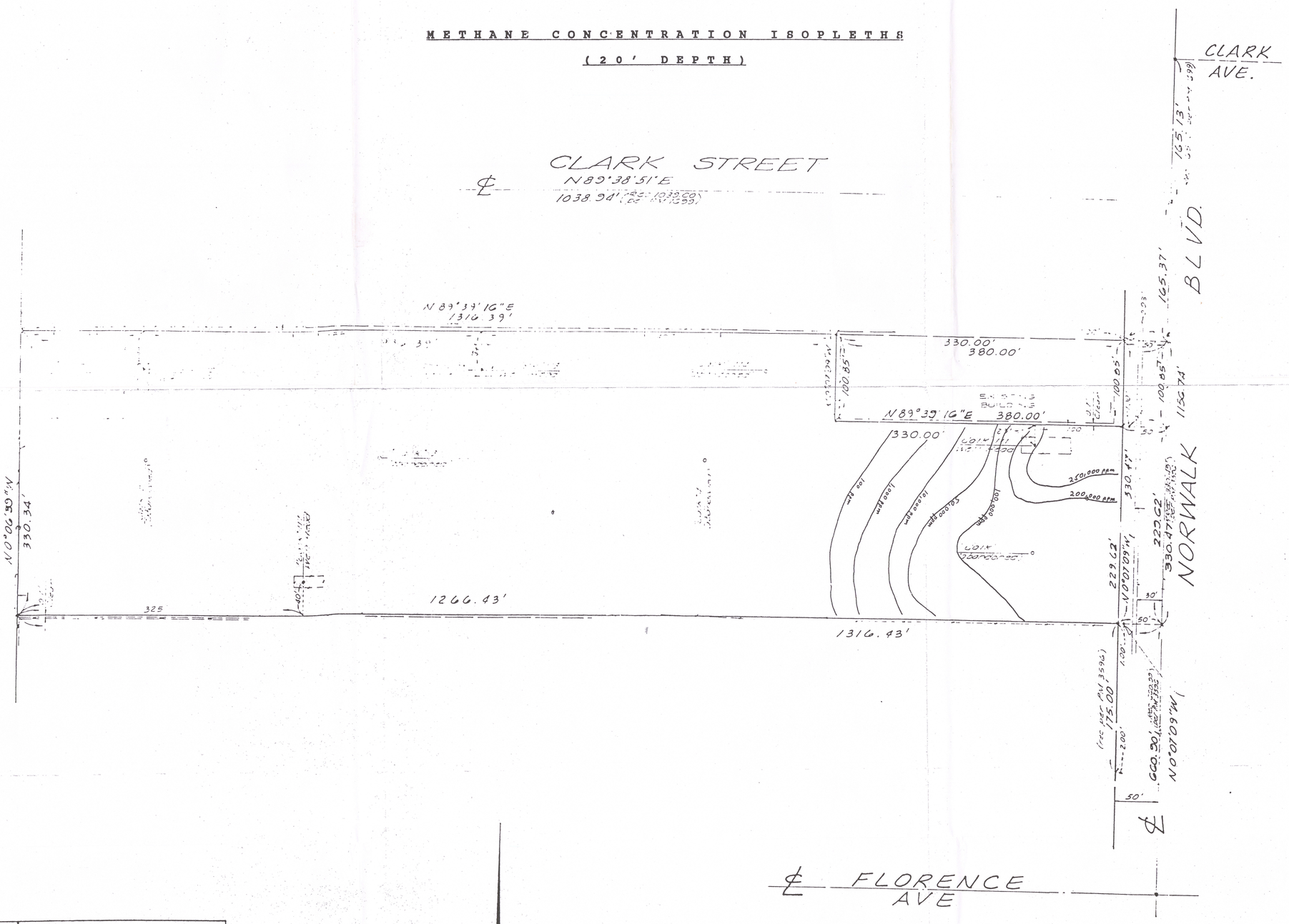
Sample No.	Depth (ft)	Time (days)	delta ^{13}C (CH4)o/oo
BH-1	20.0	1	-38.5
BH-2	20.0	1	-36.2
BH-3	20.0	1	-41.9
BH-4	20.0	1	-40.8
BH-8	10.0	1	-35.2
BH-8	20.0	1	-43.6
MW-6	10.0	7	-36.9
		14	-37.5
MW-6	20.0	7	-42.3
		14	-42.8
MW-7	20.0	7	-43.6
		14	-44.1
MW-8	10.0	7	-39.0
		14	-38.7
MW-8	20.0	7	-43.4
		14	-43.1
MW-9	10.0	7	-42.0
		14	-44.5

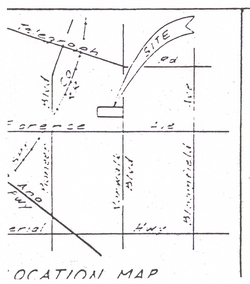
Sample No.	Depth (ft)	Time (days)	delta ^{13}C (CH4)o/oo
MW-9	20.0	7	-44.5
		14	-44.8
MW-10	10.0	7	-30.8
		14	-32.6
MW-10	20.0	7	-38.5
		14	-38.2

FIGURE 2

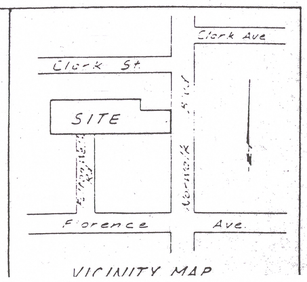
METHANE CONCENTRATION ISOPLETHS

(20' DEPTH)





LOCATION MAP



VICINITY MAP

GENERAL NOTES

1. LEGAL DESCRIPTION:
   The South half of the North half of t
   Quarter of the Southwest Quarter of S
   Township 3 South, Range 11 West, San
   Base and Meridan, in the City of Sant
   County of Los Angeles, State of Calif

   Excepting therefrom all oil, gas and
   substances contained in said land as
   that Grant Deed from John Russell Ages
   H. Agee, his wife, to General Petrole
   dated July 31, 1922 and Recorded Augus
   Book 1378, Page 75 of the Official Rec
   County.

   Further excepting therefrom, that Parc
   as conveyed in that Grant Deed from Ge
   Petroleum Corporation to Ernest R. Kar
   M. Karns, Husband and Wife, dated June
   To Wit:

   BEGINNING at the Northeast corner of s
   half of the North half of the Northeast
   the Southwest Quarter of Section 6; the
   along the Northerly line of said South
   North Half of the Northeast Quarter of
   Quarter 380.0 feet; thence Southerly a
   to the Easterly line of said South Half
   Half of the Northeast Quarter of the S
   to the Northerly line of said South Hal
   North Half of the Northeast Quarter of
   Quarter, 380.0 feet; thence Northerly a
   Easterly line of said South Half of the
   of the Northeast Quarter of the Southwes
   100.85 feet to the POINT OF BEGINNING.

2. TITLE REPORT:
   Title Report # 8800474 dated May 5, 1988
   Continental Land Title Company.

3. TITLE REPORT EXCEPTIONS:
   Item A - Taxes.
   Item B - Taxes.
   Item C - Supplemental Taxes.
   Item # 1 - Easement for roads, railroad,
   and water courses.
   Item # 2 - Lease.
   Item # 3 - Easement for street, public ut
   and municipal purposes.
   Item # 4 - Rights of public within Norwalk
   Item # 5 - Easements not disclosed by pub
   Item # 6 - Water rights.

4. DEDICATION:
   None.

5. AREA:
   Net Area - 385,141 Sq. Ft. = 8.842 Acres.

6. UTILITIES:
   This map represents a Boundary and Partial
   Topographic Survey. Active well heads ha
   shown. Underground utilities have not bee

7. ABANDONED OIL WELLS:
   The abandoned oil wells shown on this map
   plotted per California State Mining Bureau
   "Notice of Intention To Drill New Well" g
   by State of California, Department of Cons
   Division of Oil, Gas, 245 West Broadway
   [illegible] 93802-4455, Phone (21
   [illegible] Mike D. Johnson.

Description	Location
"Jalk" 1	251 feet South of North pro line and 151 feet West of c line of Norwalk Blvd.
"Jalk" 2	150 feet South and 144 feet of the Northwest Corner of
"Jalk" 3	150 feet South and 411 feet of the Northwest corner of
"Jalk" 4	150 feet South of North prop line and 530 feet West of th line of Norwalk Blvd.
"Jalk" 114	45 feet South of North propo line and 459 feet West of th line of Norwalk Blvd.

8. BASIS OF BEARINGS:
   The Bearing of North 0° 07' 09" West for
   line of Norwalk Boulevard as per Parcel Ma
   1536 filed in Book 70, Pages 98 and 99 of P
   Maps.

9. NOTE TO CONTRACTOR:
   The Contractor is required to take due prec
   measures to protect the utilities or structu
   shown and any other utilities or structures
   site. It shall be the Contractor's responsi
   to notify the owners of the utilities or str
   concerned before starting work.

   The Contractor agrees that he shall assume s
   complete responsibility for job site conditi
   during the course of construction of the Pro
   including safety of all persons and property;
   this requirement shall apply continuously an
   be limited to normal working hours; and that
   Contractor shall defend, indemnify and hold
   Owner and the Engineer harmless from any and
   liability real or alleged, in connection wit
   performance of work on the Project, excepting
   liability arising from the sole negligence of
   Owner or the Engineer.

REGISTERED ENVIRONMENTAL ASSESSOR
FLEET E. RUST, Ph.D.
NO. 01680
EXP. JUNE 30, 1991
STATE OF CALIFORNIA

PREPARED FOR

GEOSCIENCE ANALYTICAL, INC.

HAZARDOUS GAS ASSESSMENTS • ENVIRONMENTAL AUDITS
HAZARDOUS GAS REMEDIATION DESIGN

4454 Industrial Street
Simi Valley, CA 93063

(805) 526-6532

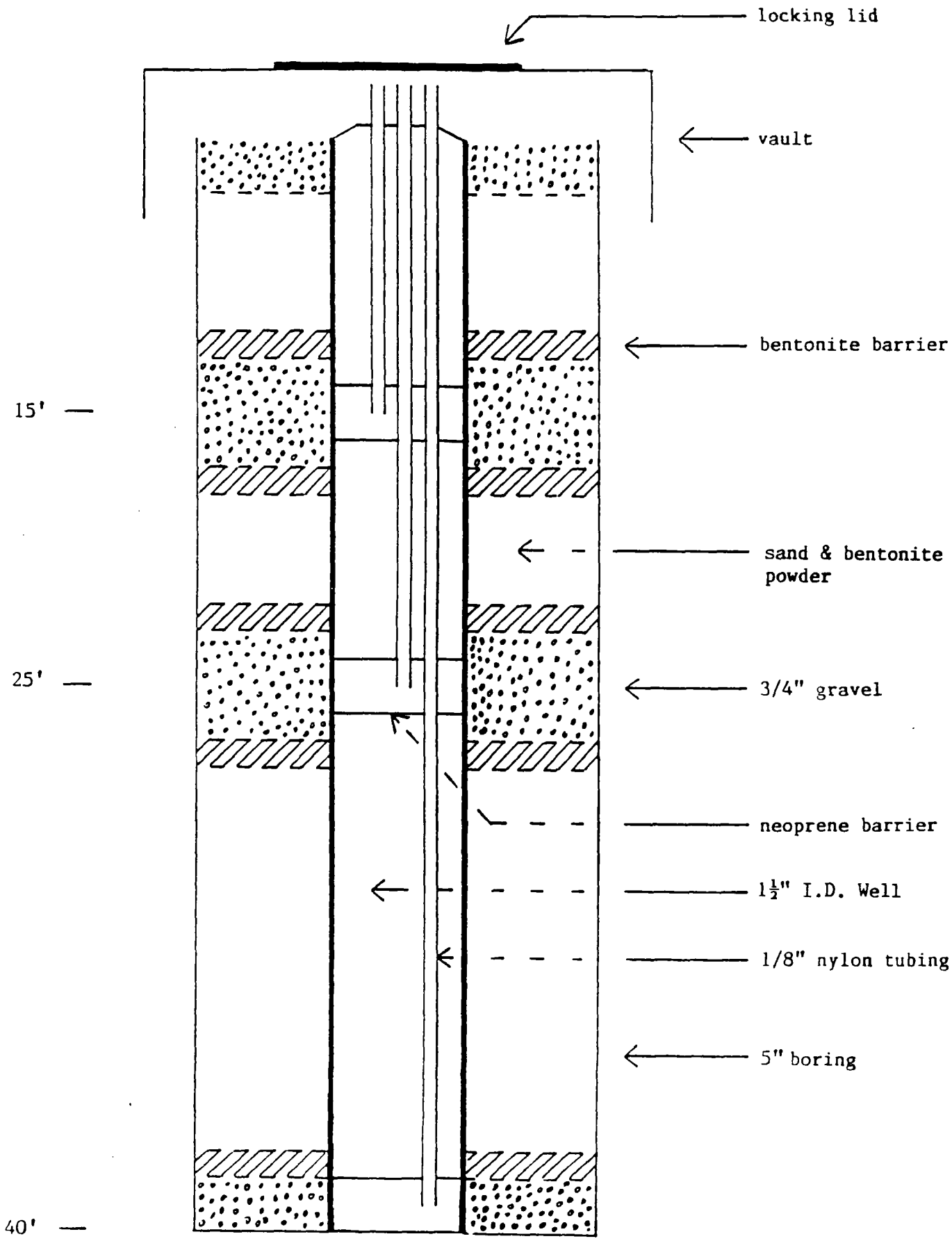
Date: 1/20/91
No.: 111B

PREPARED BY

TITLE: VICE PRESIDENT- OPERATIONS

PREPARED UNDER THE SUPER

SOIL GAS MONITORING WELL



GEOSCIENCE ANALYTICAL, INC.

TABLE 13

MONITORING WELL DEPTH CODE

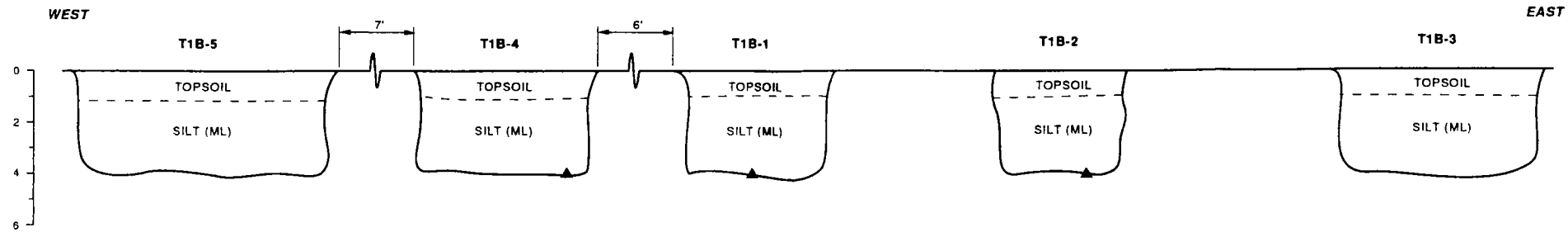
Depth (ft)	Color
10.0	blue
20.0	red

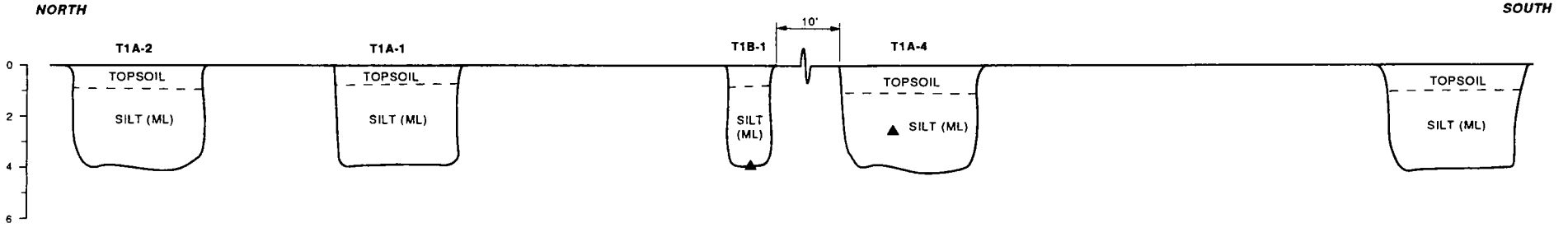
APPENDIX B
FIELD OBSERVATIONS SUMMARY

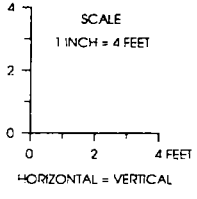
Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Geologist: DTS/SAA

Source Area	Trench Boring	Sample Number	Sample Depth	Soil Type	Petroleum Staining	Vapors PID	Vapors OVA
Sump Area No. 1							
	T1A	T1A-1	4	Silt	No	ND	ND
		T1A-4	2.5	Silt	No	ND	ND
	T1B	T1B-1	4	Silt	No	ND	ND
		T1B-2	4	Silt	No	ND	ND
		T1B-4	4	Silt	No	ND	ND
Sump Area No. 2							
	T2A	T2A-1	4.5	Silt	Yes	ND	ND
		T2A-2	3	Silt	No	ND	ND
	T2B	T2B-1	4.5	Silt	Yes	ND	ND
		T2B-2	4.5	Silt	No	ND	ND
		T2B-6	3	Silt	No	ND	ND
Sump Area No. 3							
	T3B	T3B-1	5	Silt	No	ND	ND
		T3B-4	4	Silt	No	ND	ND
		T3B-10	4	Silt	Yes	150	100
Sump Area No. 4							
	T4A	T4A-2	3	Silt	Yes	5	ND
		T4A-3	3	Silt	No	5	ND
	T4B	T4B-1A	3	Silt	Yes	100	ND
		T4B-1B	3	Silt	No	ND	ND
		T4B-3	3	Silt	No	5	ND
Sump Area No. 5							
	T5A	T5A-1	5	Silt	No	ND	ND
		T5A-3	5	Silt	No	ND	ND
	T5B	T5B-2A	6	Silt	No	ND	ND
		T5B-2B	5	Silt	No	ND	ND
		T5B-2C	5	Silt	No	ND	ND
		T5B-2D	6	Silt	No	ND	ND
	Sump	5-DRUM	3	Fill	Rusty	ND	ND
Sump Area No. 6							
	T6A	T6A-3	5	Silt	No	1	ND
		T6A-6	3	Silt	No	5	ND
		T6A-7	3.5	Silt	No	ND	ND
		T6A-8	6.5	Silt	No	ND	ND
	T6B	T6B-7A	6	Silt	No	ND	ND
		T6B-7B	5	Silt	No	ND	ND
Sump Area No. 7							
	T7A	T7A-1	5	Silt	No	ND	ND
		T7A-1N	5	Silt	No	5	ND
		T7A-1S	4	Silt	No	ND	ND
	T7B	T7B-3	5	Silt	No	ND	ND
		T7B-5	6	Silt	No	ND	ND
		T7C-1	5	Silt	No	ND	ND
		T7C-2	5	Silt	No	ND	ND
Sump Area No. 8							
	T8A	T8A-1	3	Silt	No	ND	ND
		T8A-2	3.5	Silt	No	2	ND
	T8B	T8B-1	3	Silt	No	ND	ND
		T8B-2A	3	Silt	Yes	3	ND
		T8B-2B	4	Silt	No	ND	ND
Sump Area No. 9							
	T9A	T9A-1a	4	Silt	Yes	NA	>1000
		T9A-1b	4	Silt	No	NA	70
		T9A-2	5	Silt	No	NA	2
		T9A-3	5	Silt	No	NA	ND
	T9B	T9B-1	5	Silt	Slight	NA	20
Boneyard Area							
	TLA	TLA-1	3	Fill	No	ND	ND
		TLA-2	3	Fill	No	ND	ND
		TLA-3	3	Silt	No	ND	ND
	TLB	TLB-1	3	Fill	No	ND	ND
		TLB-5	3	Silt	No	ND	ND

numeric reviewer____ 10-Oct-91







EXPLANATION

▲ Test Pit Soil Sample Location

DRAFT

Appendix C:

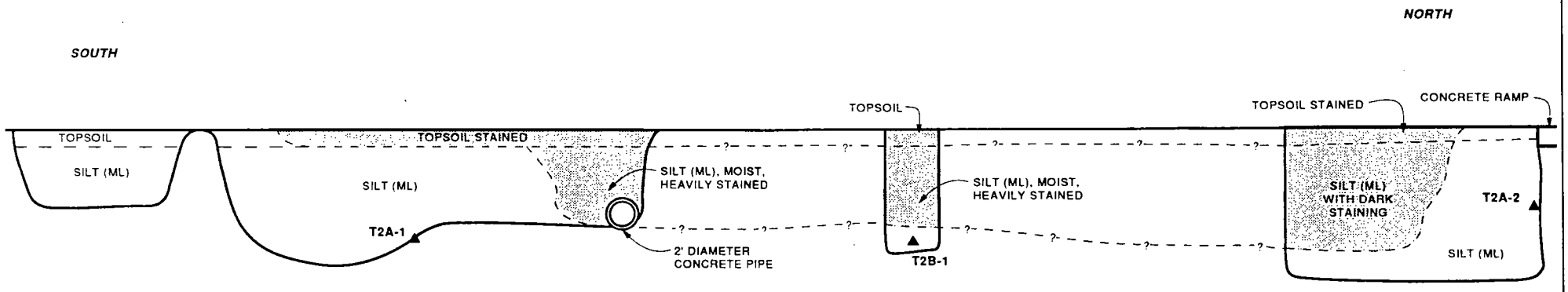
TEST PIT CROSS-SECTION T1
WEST TO EAST/NORTH TO SOUTH

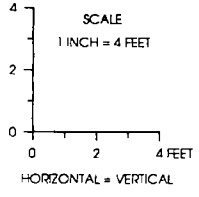
Project No. 2193
Mobil-Jalk Fee

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022693AXS/sci

2193-24





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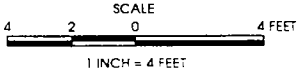


EXPLANATION

T2B-1 ▲ Test Pit Soil Sample Location

Areas which Appear to be Affected based on Visual Observations and Field Screening by OVA and PID

Appendix C :

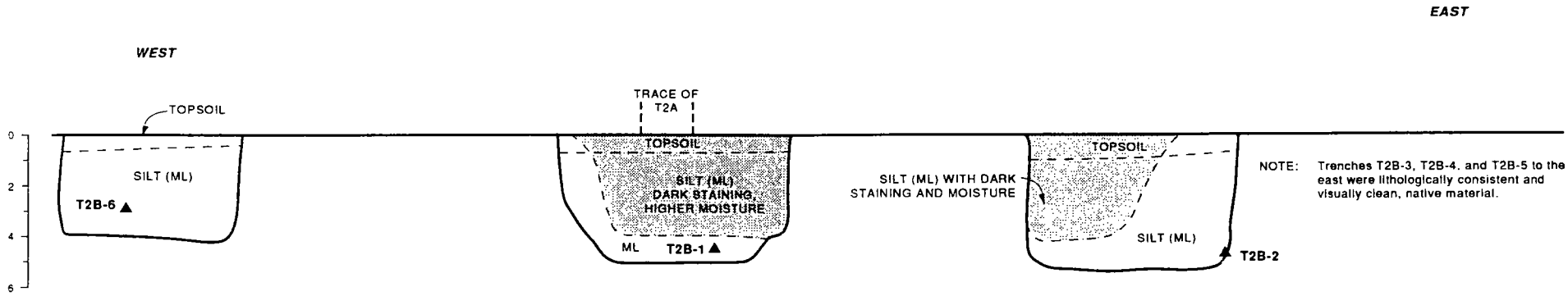
TEST PIT CROSS-SECTION T2 SOUTH TO NORTH

Project No. 2193
Mobil-Jalk Fee

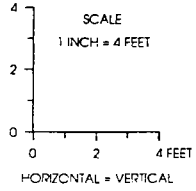
LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022291AX5/1C1

2193-12



NOTE: Trenches T2B-3, T2B-4, and T2B-5 to the east were lithologically consistent and visually clean, native material.



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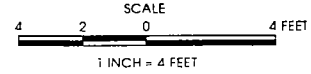


EXPLANATION

T2B-6 ▲ Test Pit Soil Sample Location

Areas which Appear to be Affected based on Visual Observations and Field Screening by OVA and PID

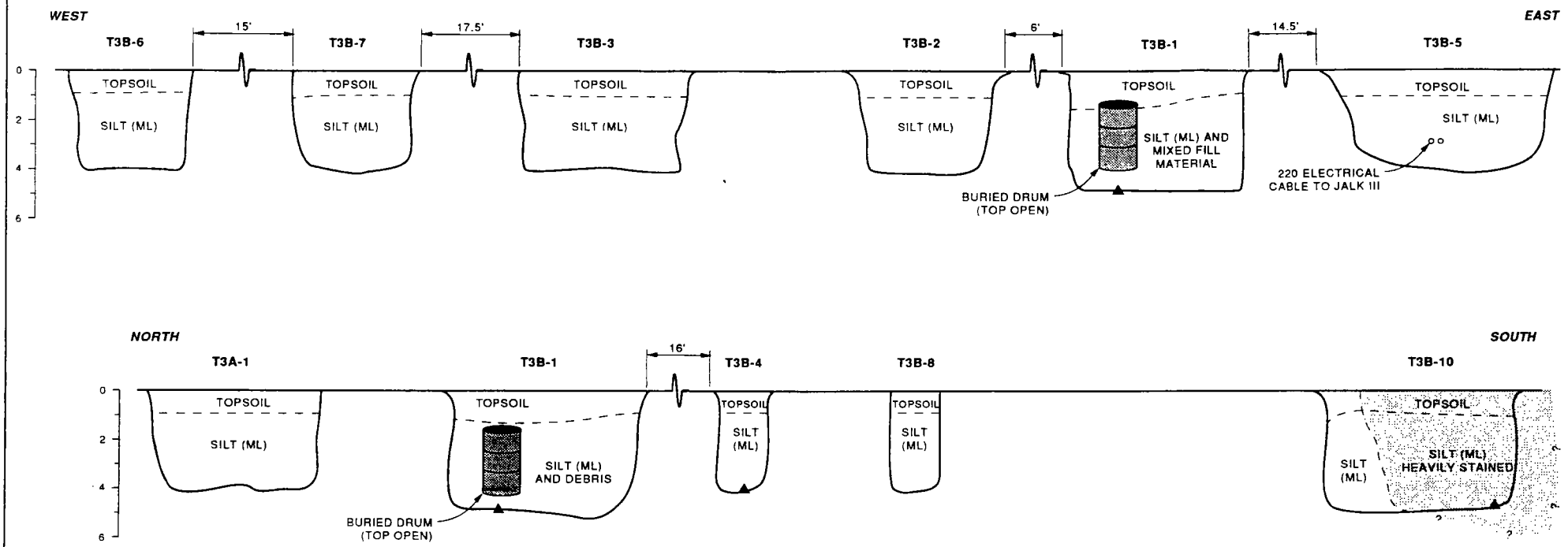
Appendix C :

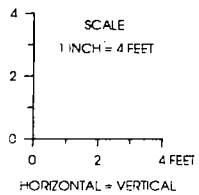
TEST PIT CROSS-SECTION T2
WEST TO EAST

Project No. 2193
Mobil-Jalk Fee

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022291AXS/sc; 2193-13





EXPLANATION

▲ Test Pit Soil Sample Location

Areas which Appear to be Affected by TPH on Visual Observation and Field Screening by OVA and PID

DRAFT

Appendix C:

TEST PIT CROSS-SECTION T3
WEST TO EAST/NORTH TO SOUTH

Project No. 2193
Mobil-Jalk Fee

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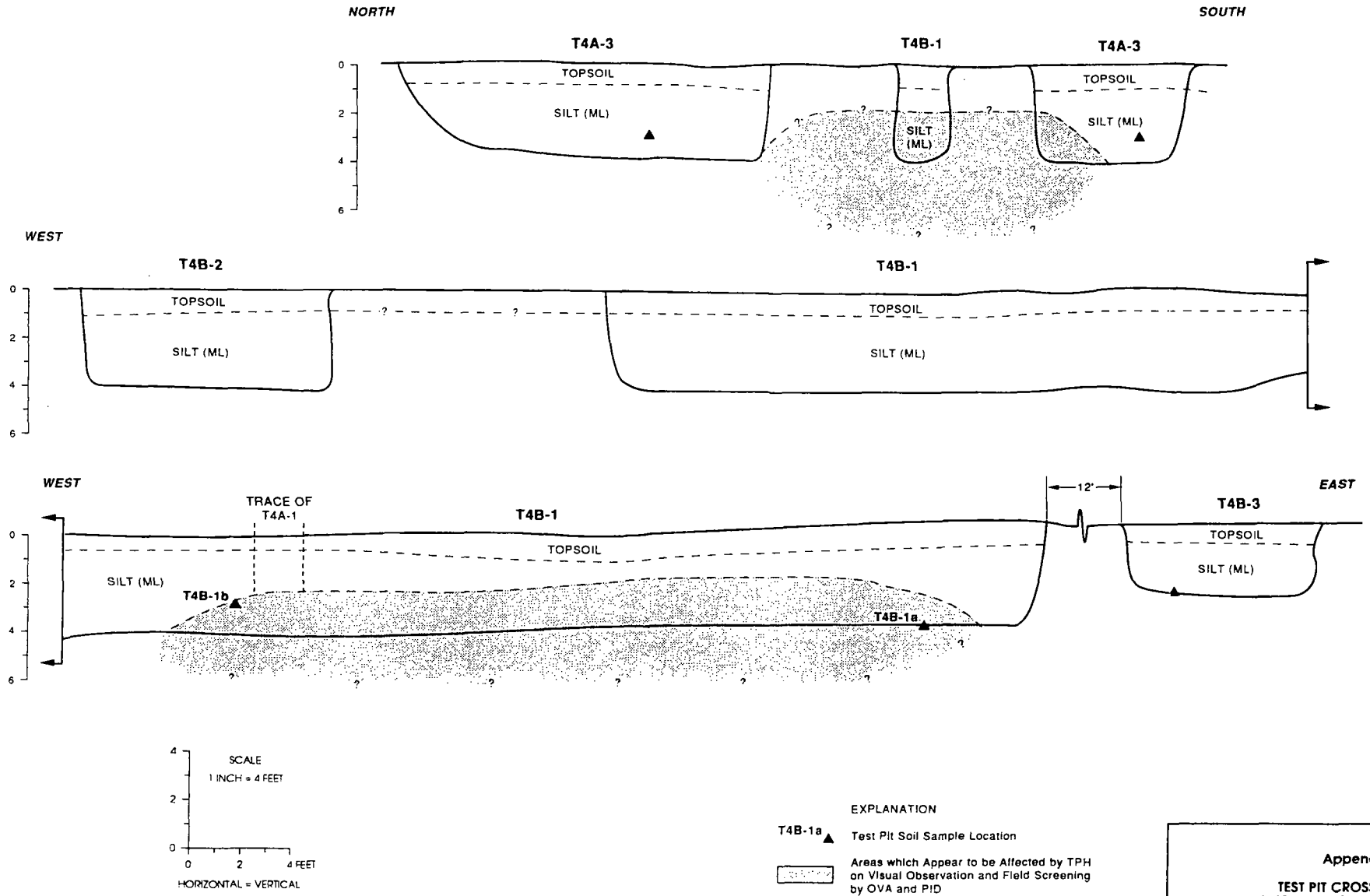
2193-23



Appendix C:

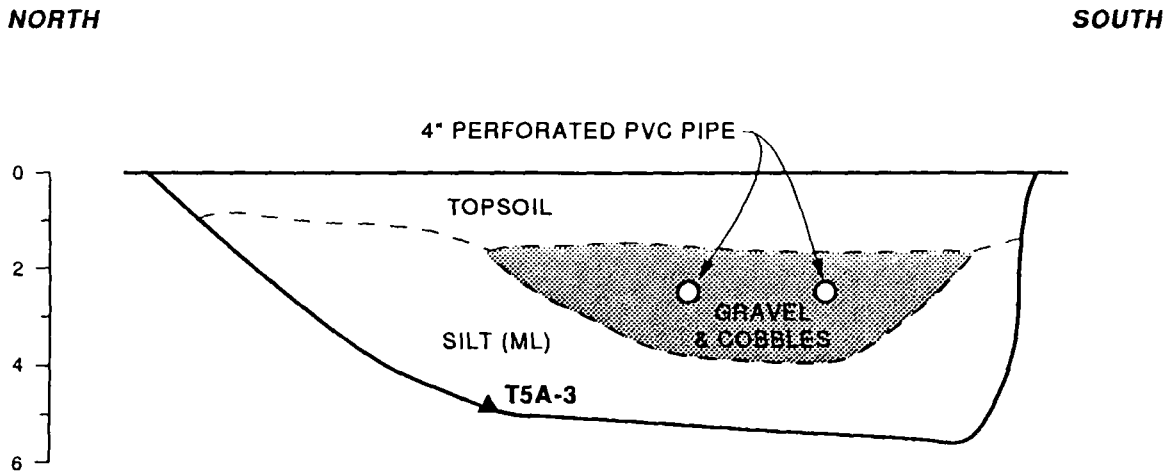
TEST PIT CROSS-SECTION T4
WEST TO EAST/NORTH TO SOUTH

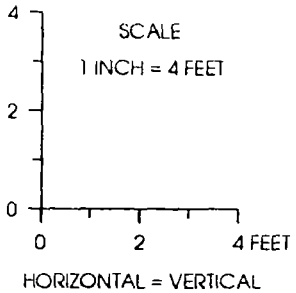
Project No. 2193
Mobil-Jalk Fee

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022591AXS/SCI

2193-21





EXPLANATION

T5A-3 ▲ Test Pit Soil Sample Location

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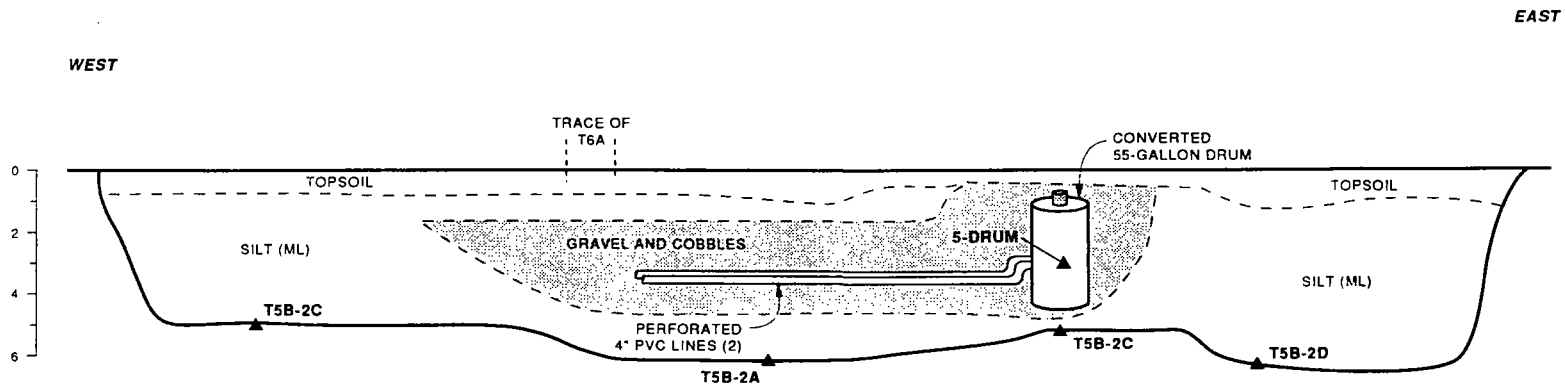
Appendix C: TEST PIT CROSS-SECTION T5A-3 NORTH TO SOUTH



DRAFT

SCALE

4 2 0 4 FEET

1 INCH = 4 FEET

EXPLANATION

T5B-2C ▲ Test Pit Soil Sample Location

Gravel/Cobble Fill Zone for Leach Field

Appendix C:

TEST PIT CROSS-SECTION T5B-2
WEST TO EAST

Project No. 2193
Mobil-Jalk Fee

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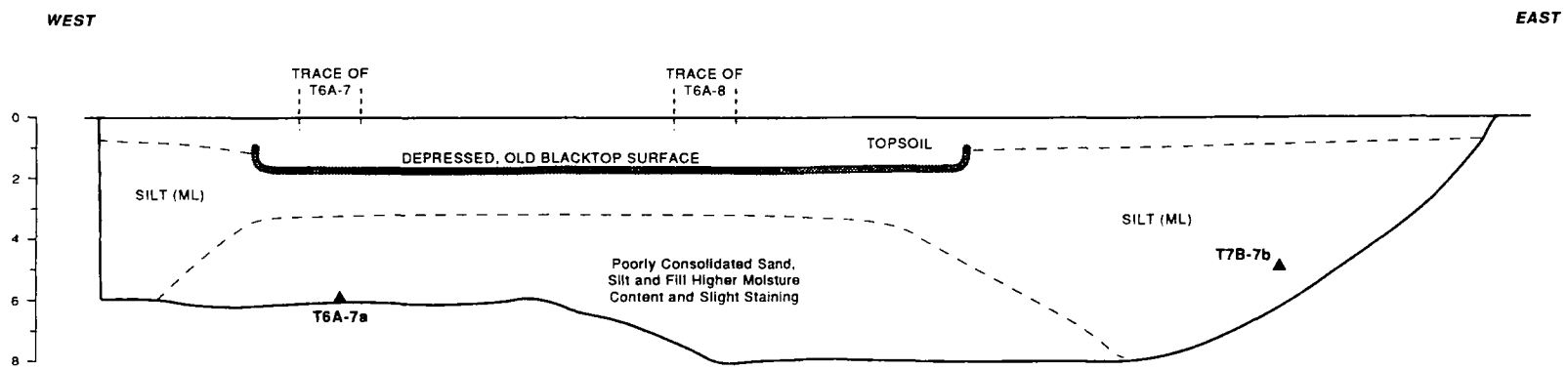
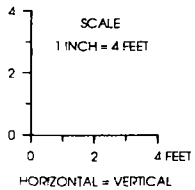
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022291AX5/sc)

2193-15





EXPLANATION

T7B-7b ▲ Test Pit Soil Sample Location

DRAFT

Appendix C:

TEST PIT CROSS-SECTION T6B-7

Project No. 2193
Mobil-Jalk Fee

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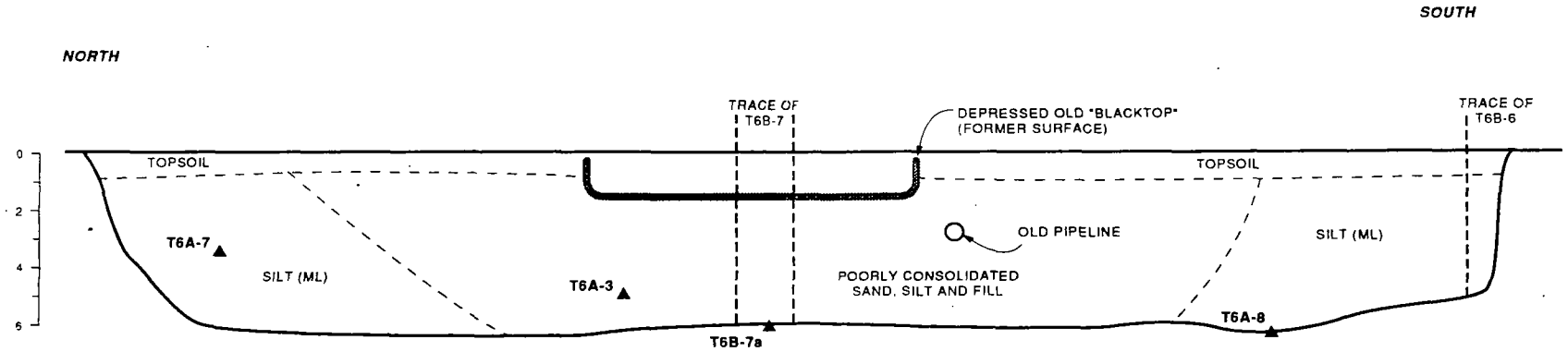
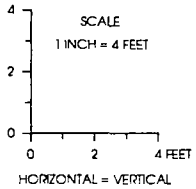
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022891AXS/1a

2193-1a





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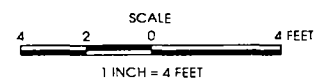

EXPLANATION

T6A-7 ▲ Test Pit Soil Sample Location

Appendix C :

TEST PIT CROSS-SECTION T6A-7 AND T6A-8 NORTH TO SOUTH

Project No. 2193
Mobil-Jalk Fee

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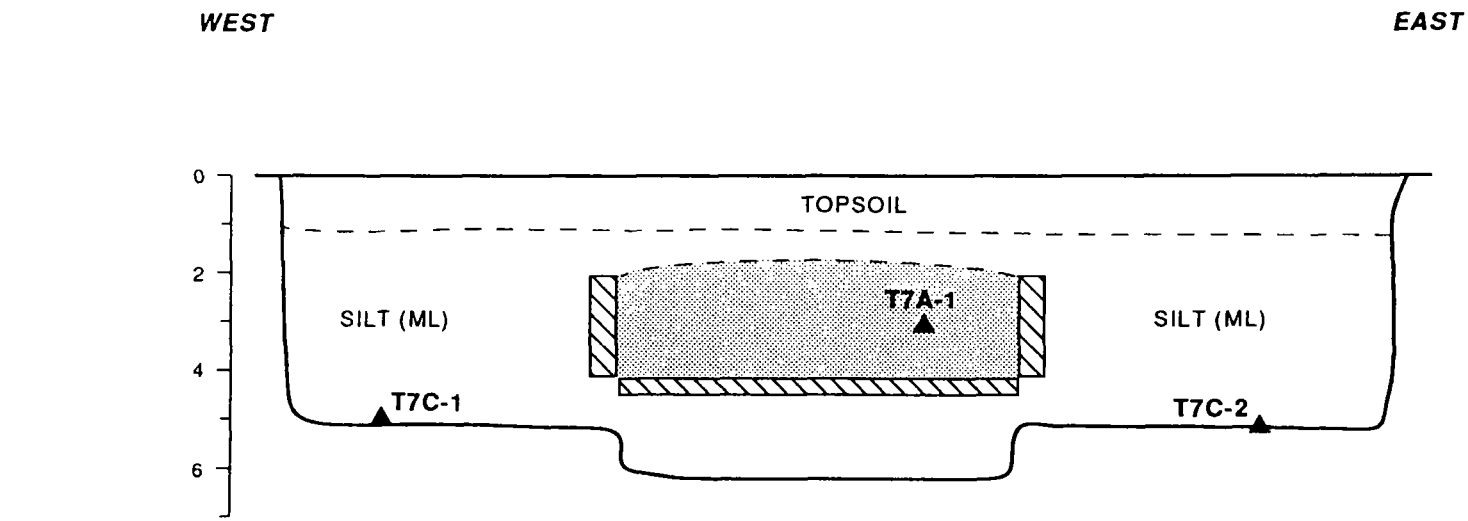
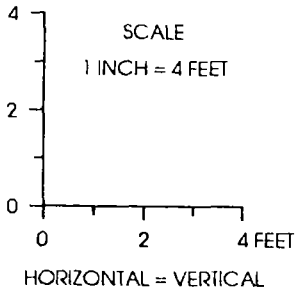
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022091AXS/scj 2193-17





EXPLANATION

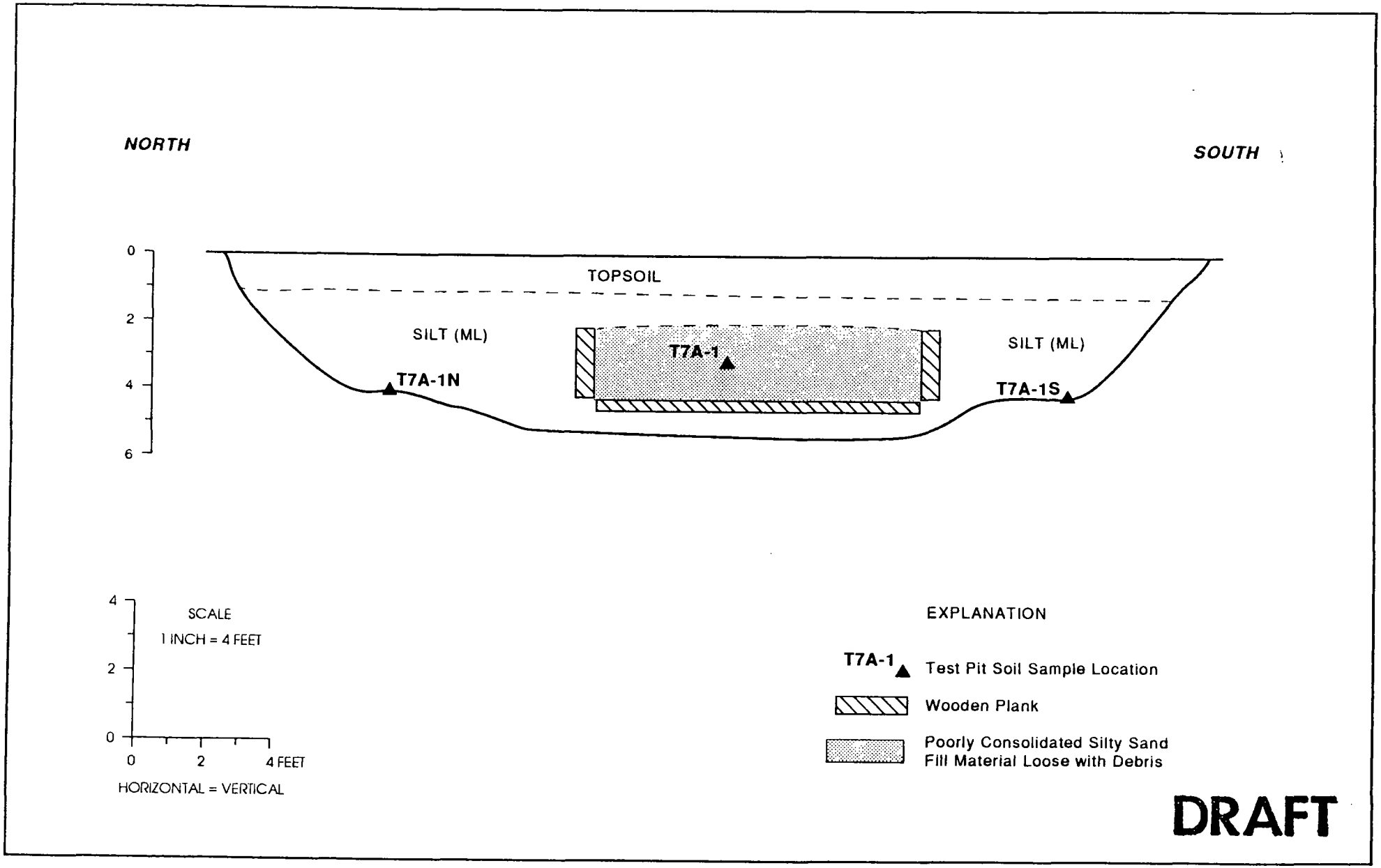
T7C-2 ▲ Test Pit Soil Sample Location

Wooden Plank

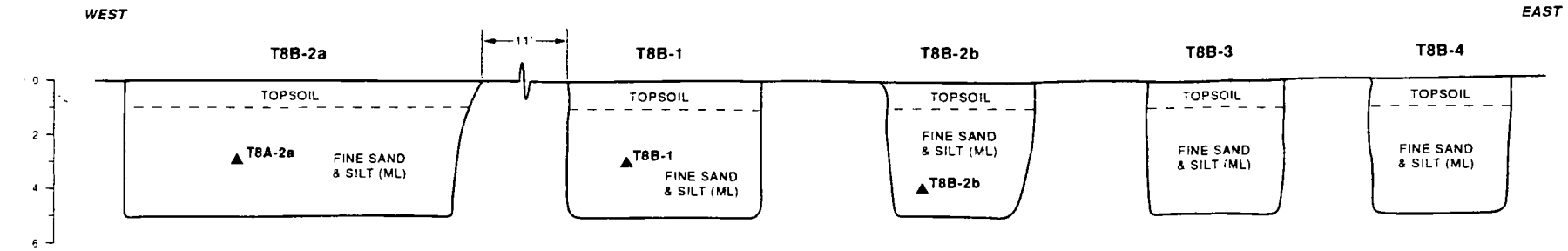
Poorly Consolidated Silty Sand
Fill Material Loose with Debris

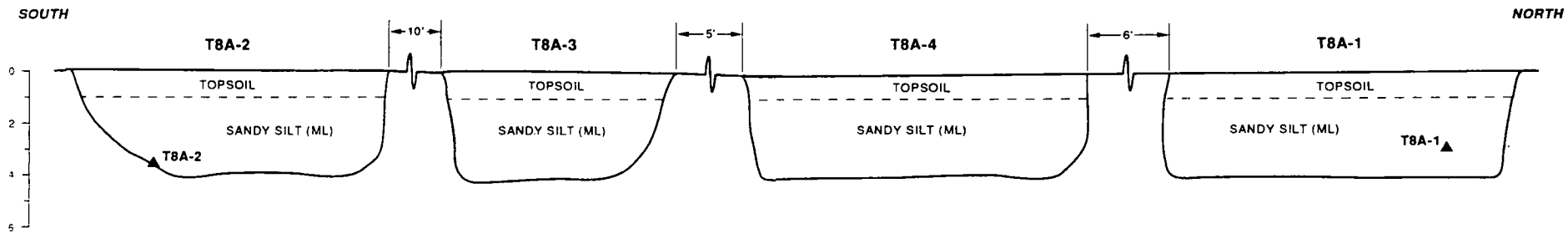
DRAFT

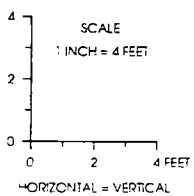
Appendix C: TEST PIT CROSS-SECTION T7C WEST TO EAST



Appendix C: TEST PIT CROSS-SECTION T7A-1 NORTH TO SOUTH







EXPLANATION

T8B-2b ▲ Test Pit Soil Sample Location

DRAFT

Appendix C:

TEST PIT CROSS-SECTION T8
WEST TO EAST/NORTH TO SOUTH

Project No. 2193
Mobil-Jalk Fee

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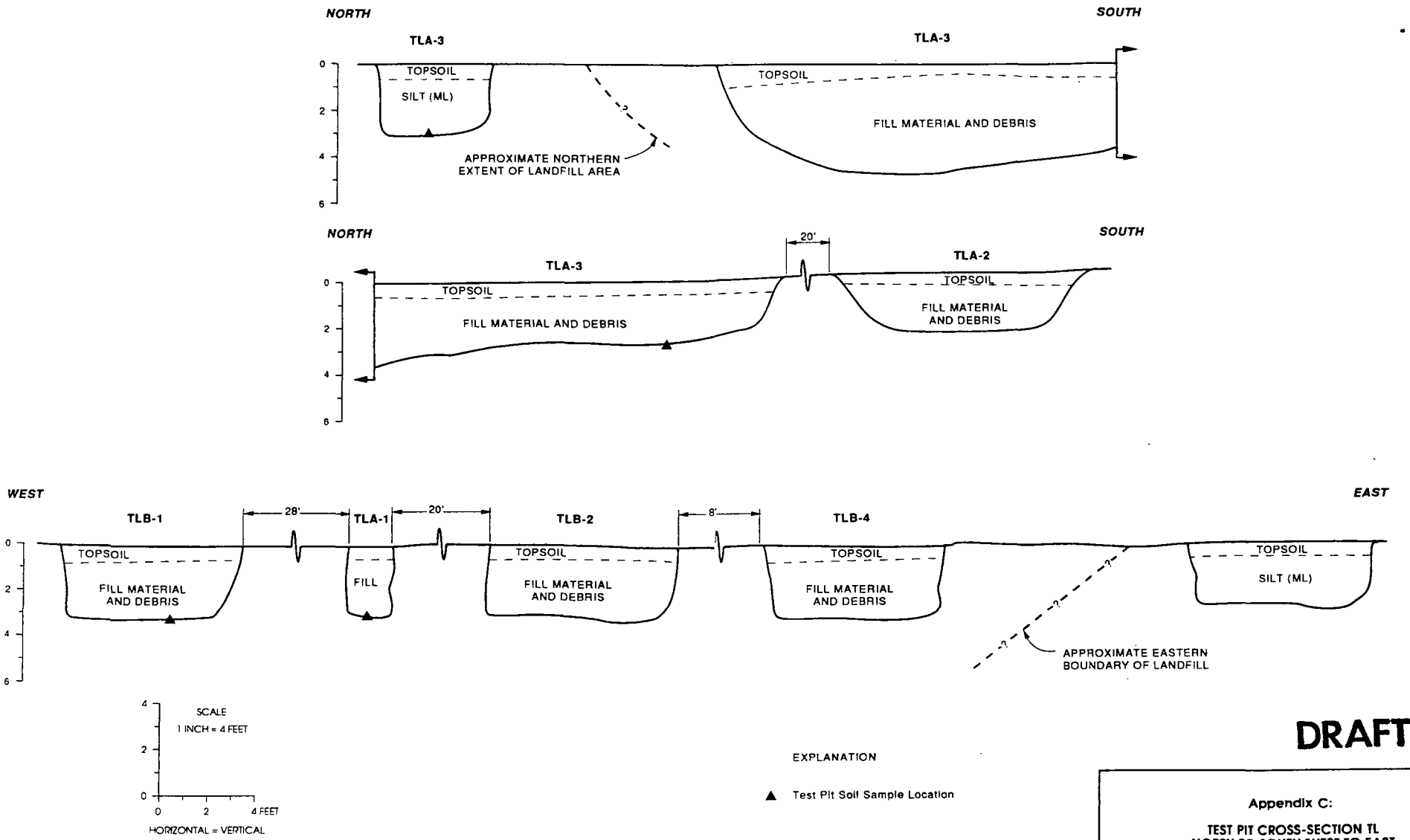
2193-20



DRAFT

Appendix C:

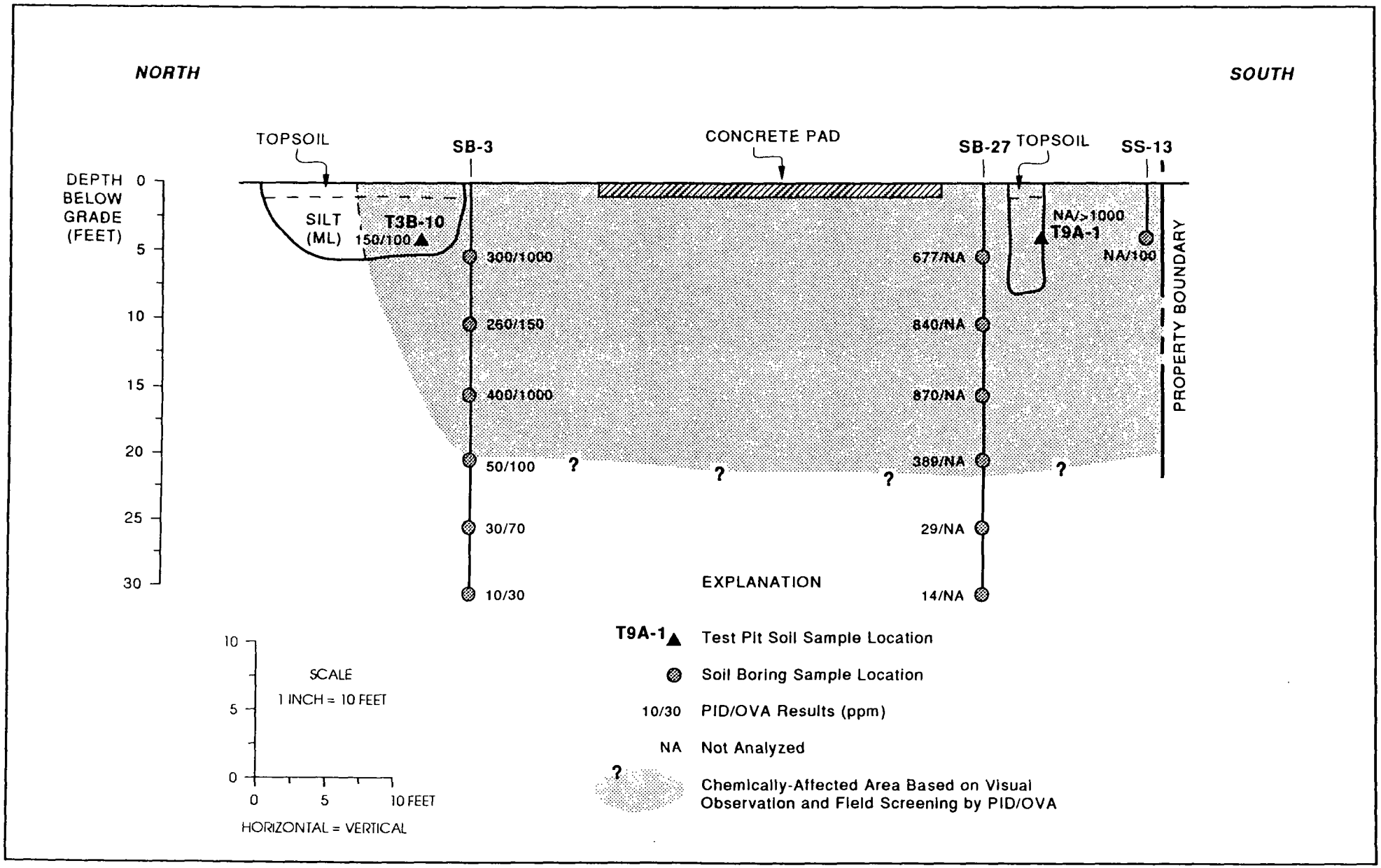
TEST PIT CROSS-SECTION TL NORTH TO SOUTH/WEST TO EAST

Project No. 2193
Mobil-Jalk Fee

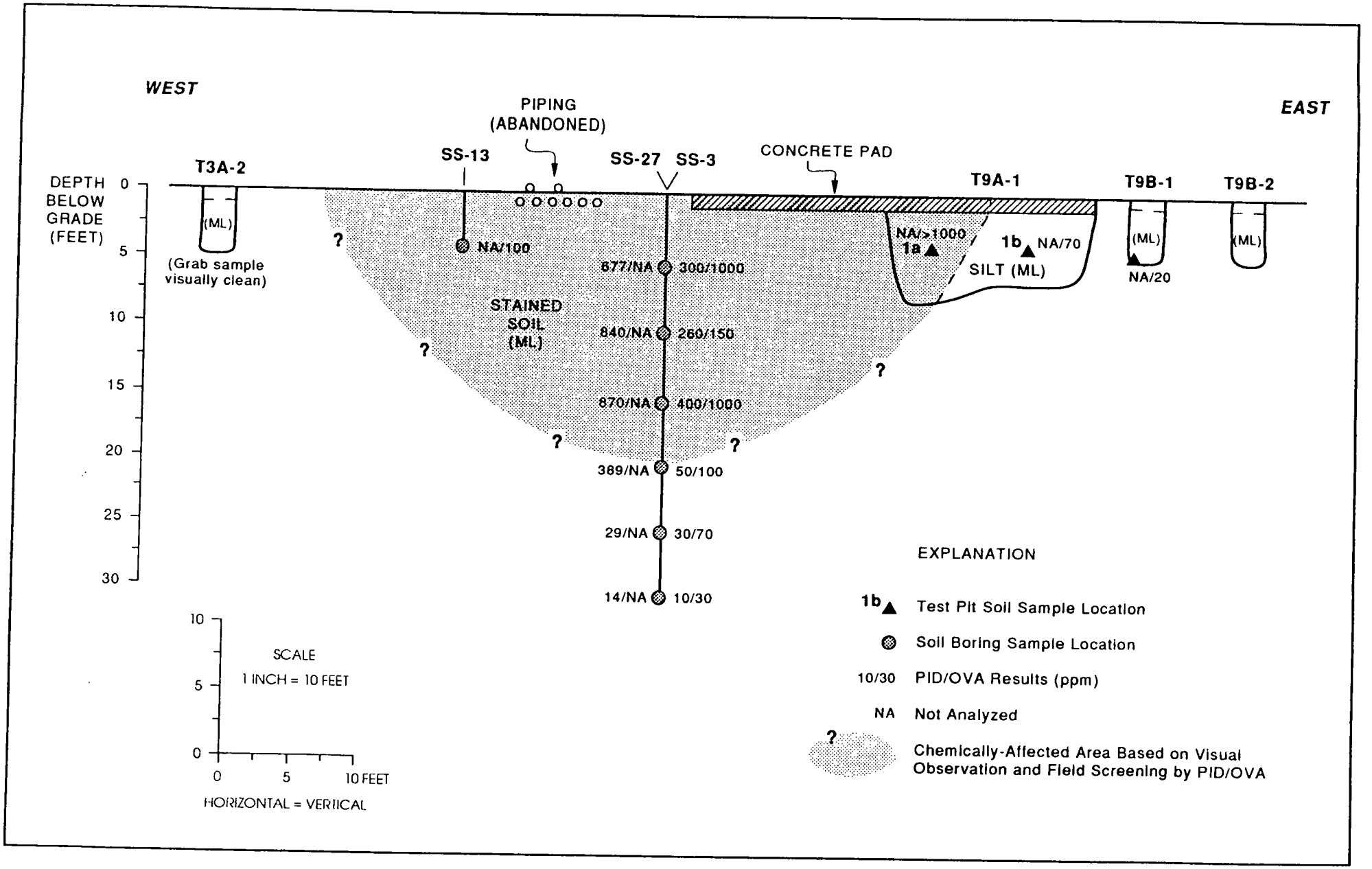
LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

022591AXS/sc1

2193-22



Appendix C : TEST PIT CROSS-SECTION T3B-10 & T9A-1 NORTH TO SOUTH



Appendix C : TEST PIT CROSS-SECTION T3A-2 THRU T9B-2 WEST TO EAST

Project No. 2193
Mobil-Jalk Fee

100391SAA/ldr

LEVINE • FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		ASPHALT (6 inches)			
		SILT (ML), orange-brown (10YR 4/6), dry, no plasticity, stiff.			
05			SB-1-5	41	8/20
10		-minor sand	SB-1-10	26	200/10
15		-no plasticity, stiff, slight fracturing	SB-1-15	27	10/ND
20			SB-1-20	69	10/ND
25		-medium stiff, dense with some clay (20%), slight orange-gray mottling	SB-1-25	28	15/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-1

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		GRAVEL AND SAND with COBBLES, light tan			
		SANDY SILT (ML), grayish tan (10YR 3/4), slightly moist, low plasticity, soft, sand (<30%).			
05			SB-2-5	63	6/ND
10		-greenish gray (10YR 3/2), moist, fine sand (30%)	SB-2-10	38	10/ND
15			SB-2-15	--	13/ND
20		-dry, sand (40%)	SB-2-20	76	5/ND
25		-brownish yellow (10YR 5/6), with gray mottling (5YR 5/3), color change from above occurred at 24.5 feet	SB-2-25	43	ND/ND
30		-olive green (5YR 4/3), minor fine sand (<10%)	SB-2-30	76	ND/ND
		SAND (SP), medium gray (5YR 4/2), dry, .5mm, soft, poorly sorted with 25% gravel, angular.			
35	Continued				

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-2

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/lar

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SAND (SP), medium gray (5YR 4/2), dry, .5-1mm, soft, 25% gravel, angular.	SB-2-35	60	ND/20
40		-gray (5YR 4/2), 1-2mm, soft, uncemented	SB-2-40	45	ND/20
45		-greenish gray (5YR 4/2), .1-1mm, soft	SB-2-45	28	ND/75
50		-gray (5YR 5/1), .5-1mm, soft, crumbly, subangular	SB-2-50	62	50/100
55		-light gray (10YR 6/1), .5-2mm, soft	SB-2-55	66	40/100
60		-.5-2mm, soft, minor lenses of greenish-gray silt (5Y 4/3)	SB-2-60	60	20/120
		Bottom of boring at 61.5 feet.			
65		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
70					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-2 (CONTINUED)

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT (ML), dark gray (5Y 4/1), dry, low plasticity, medium stiff, some fine sand (10% and organic fragments).			
05			SB-3-5	21	300/100
10		SANDY SILT (ML), dark gray (5GY 4/1), soft, sand (20%) 1-2mm	SB-3-10	49	260/150
15		-color change-lighter at 14 feet -dark gray (5Y 4/1), dry, no plasticity, stiff	SB-3-15	77	400/1000
20		-light gray (5Y 4/1), low plasticity, soft	SB-3-20	86	50/100
25		-no plasticity, stiff, slight orange mottling	SB-3-25	50	30/70
30		-slight orange staining, minor clay (10%)	SB-3-30	70	10/30
		Bottom of boring at 31.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-3

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		GRAVEL and SILT, with organics (deep roots), damp from rain.			
		SILT (ML), medium brown (10YR 4/4), slightly moist, no plasticity, stiff, slight orange fracture staining.			
05			SB-4-5	45	ND/ND
10		-dry, low plasticity, medium stiff, trace of orange staining	SB-4-10	20	ND/ND
15		-brown (10YR 6/3)	SB-4-15	85	11/ND
20		-light brown (10YR 6/2)	SB-4-20	75	10/1.0
25		-brown (10YR 5/3)	SB-4-25	85	17/5
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-4

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022591AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		GRAVEL/SILT/SURFACE ORGANICS			
		SILT (ML), orange-brown (10YR 4/6), dry, low plasticity, medium stiff, crumbly, 10% fine sand, no odor.			
05			SB-5-5	125	10/ND
		SAND (SP), light brown (10YR 5/8), moist, 1-2mm, loose, minor silt (25%).			
10			SB-5-10	55	15/ND
15		SILT (ML), light gray (10YR 6/2), low plasticity, medium stiff, dry near contact with upper sand zone.			
			SB-5-15	52	15/ND
20		-light brown-gray (10YR 5/4)			
			SB-5-20	43	5/ND
25		-light gray (10YR 5/2), dry, no plasticity, minor fine sand (15%) subangular .5-1mm			
			SB-5-25	45	5/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: Jeff

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-5

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

22289 1AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		GRAVEL/SILT/TOP SOIL and ROOTS			
		SILT (ML), orange-brown (10YR 4/6), dry, no plasticity, medium stiff, minor sand (10%).			
05			SB-6-5	75	20/20
		SAND (SP), light brown (10YR 6/6), dry, 1-2mm, compact, (10%) silt.			
10			SB-6-10	55	15/10
15		SILT (ML), orange-brown (10YR 5/6), dry, low plasticity, medium stiff, contact with upper sand zone.	SB-6-15	60	5/ND
20		-light gray (10YR 6/1), soft	SB-6-20	53	5/ND
25		-brownish gray (10YR 5/2), no plasticity, medium stiff, minor clay intermixed (15%)	SB-6-25	90	5/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-6

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		TOP SOIL with ROOTS, minor amount of GRAVEL (10%)			
		SILT (ML), medium brown (10YR 5/4), dry, no plasticity, medium stiff, minor fine sand (20%).			
05			SB-7-5	115	ND/ND
10		SAND (SP), dark orange-brown (10YR 4/6), 1-2mm, compact, silt (10%).	SB-7-10	80	30/ND
15		SILT (ML), grayish brown (10Y 4/2), dry, low plasticity, medium stiff, uniform appearance with trace sand (5%).	SB-7-15	100	10/ND
20		-light gray (10YR 6/3), no plasticity, soft, slight orange iron staining	SB-7-20	85	ND/ND
25		-dark gray (10YR 3/2), low plasticity, dark orange mottling	SB-7-25	45	ND/ND
30		-medium gray (10YR 6/1), stiff	SB-7-30	95	ND/ND
		Bottom of boring at 31.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [signature]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-7

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

G22891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	OVA Value (ppm)
		SILT (ML), light brown (10YR 4/4), dry, low plasticity, stiff, organic roots and minor fine sand (20%), 1-inch miscellaneous debris (fill material).			
05			SB-8-5	25	nd
10		SAND (SP), dark brown (10YR 3/1), dry, .5-1mm, loose silt (15%), staining and organics, black flakes in stains.	SB-8-10	25	100
15		SILT (ML), gray-brown (10YR 4/3), dry, low plasticity, medium stiff, trace sand (10%).	SB-8-15	42	20
20		-gray-tan (5Y 4/3), slight orange staining	SB-8-20	37	ND
25		-medium plasticity, minor trace of clay (<5%)	SB-8-25	90	ND
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-8

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and interval	Penetration Rate (Blows/ft.)	OVA Value (ppm)
		GRAVEL, ORGANICS and SILT, orange-brown color			
		SANDY SILT (ML), orange-brown (10YR 5/6), dry, no plasticity, stiff, sand (20%) .5-1mm.			
05			SB-9-5	15	ND
10		-dark brown (10YR 3/6), low plasticity, sand (20%) .5-1mm.	SB-9-10	30	20
15		SAND (SP), orange-brown (10YR 4/6), dry, .5-1mm, loose, subangular, trace of silt (<10%).	SB-9-15	32	50
20		SANDY SILT (ML), light brown (10YR 5/4), dry, no plasticity, medium stiff, minor fine sand (15%).	SB-9-20	36	15
25		-light gray (5Y 5/1), medium plasticity, flaky, slight orange staining along fractures	SB-9-25	43	5
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-9

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT (ML), orange-brown (10YR 4/6), stiff.			
05			SB-10-5	70	5/40
10		-orange-brown (10YR 5/6), low plasticity, slight gray mottling	SB-10-10	65	40/2.0
15		-gray (10YR 4/1), no plasticity	SB-10-15	120	12/30
20		-gray-brown (10YR 5/3), medium plasticity, orange mottling	SB-10-20	56	12/150
25		-tan-gray (10YR 4/4), low plasticity, medium stiff, orange mottling from 23.5 to 24 feet	SB-10-25	80	10/60
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [illegible]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-10

Project No. 2193
Jalk Fee-Santa Fe Springs

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022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT & mixed SAND, organics & concrete chunks, orange-brown			
		SILT (ML), orange-brown (10YR 5/8), dry, low plasticity, hard, roots and organic material.			
05			SB-11-5	100	ND/ND
10		-medium brown (10YR 4/4), trace of fine sand (<10%)	SB-11-10	105	ND/ND
15		-grayish brown (10YR 5/3), no plasticity, stiff	SB-11-15	95	1.0/ND
20		-light gray (10YR 6/1), fractured, slight orange iron staining	SB-11-20	93	20/8
25		-gray (10YR 5/2), hard, orange iron-staining (10YR 5/4)	SB-11-25	75	170/50
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-11

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		GRAVEL, SAND, SILT, ORGANICS & DEBRIS (Fill Material)			
		SILT (ML), light brownish-orange (10YR 5/4), dry, no plasticity, hard.			
05			05 SB-12-5	150	5/ND
10		-orange-brown (10YR 4/6)	10 SB-12-10	70	7.0/ND
15		-brown (10YR 5/3)	15 SB-12-15	110	5.0/ND
20		-gray (10YR 6/2), slight orange mottling	20 SB-12-20	65	3/ND
25		-gray (10YR 3/1), low plasticity, orange mottling (10YR 6/8)	25 SB-12-25	50	2.0/5.0
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

- Clay
- Silt
- Sand
- Gravel

- Interval Sampled
- Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-12

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	Description (LITHOLOGY)	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		FILL MATERIAL AND ROOTS			
		SANDY SILT (ML), orange brown (10YR 5/8), dry, no plasticity, stiff, minor fine sand (20%).			
05			SB-13-5	100+	ND/ND
10		-orange-brown (10YR 4/6), hard, minor fine sand (<10%) -duplicate sample	SB-13-10	63	5/ND
15		-light brown (10YR 6/3), dry, no plasticity, hard, fractured, minor fine sand (<10%)	SB-13-15	100+	ND/ND
20		-brown (10YR 5/3), medium stif	SB-13-20	70	1.0/ND
25		-brown (10YR 5/4), medium plasticity, orange mottling and iron staining, slight clay content (10%)	SB-13-25	43	1.0/--
		Bottom of boring at 25.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [illegible]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-13

Project No. 2193
Jalk Fee-Santa Fe Springs

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02289 IAXS/ldr

Depth, feet	Graphic Log	Description (LITHOLOGY)	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SILT (ML), dark gray, part of dirt roadway.			
		SILT (ML), dark brown (10YR 4/4), moist, medium plasticity, medium stiff, trace fine sand (5%) uniform, slight black staining.			
05			05 SB-14-5	21	ND
10			10 SB-14-10	21	ND
		SANDY SILT (ML), dark brown (10YR 4/4), moist, low plasticity, sand (20%) .5-1mm.			
		SAND (SP), light tan (10YR 7/3), .5-2mm, loose, subangular, at contact with lower silt, medium gray (10YR 6/2), sand poorly sorted.			
15			15 SB-14-15	26	33
		SILT (ML), gray (10YR 6/4), dry, low plasticity, soft, powdery.			
20			20 SB-14-20	52	10
25		-gray (10YR 5/2), stiff, slight orange staining in fractures	25 SB-14-25	83	30
		Bottom of boring at 25.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-14

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		ASPHALT			
		SANDY SILT (ML), dark brown (10YR 3/6), moist, no plasticity, medium stiff, sand (20%).			
05			SB-15-5	5-6"	ND/ND
		SILTY SAND (SP), dark brown (10YR 3/6), moist, low plasticity, medium stiff, .5-1.5mm, silt (20%).			
10			SB-15-10	45	20/ND
15		SILT (ML), dark brown (10YR 3/6), moist, low plasticity, stiff, contact with sand above, slight mixing.	SB-15-15	50	ND/ND
20		-dark brown (10YR 4/6), soft	SB-15-20	35	--/ND
25		-gray (10YR 5/3), medium stiff, some orange staining along fractures	SB-15-25	35	--/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-15

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		TOP SOIL with ROOTS and GRAVEL			
		SILT (ML), medium brown (10YR 5/6), dry, no plasticity, medium stiff, organics and roots, minor fine sand (5%).			
05			SB-16-5	31	10
10		-low plasticity, uniform, occasional gravels	SB-16-10	56	10
15		-gray-brown (10YR 4/3), no plasticity, stiff	SB-16-15	63	15
20		-brown (10YR 5/4), low plasticity, soft, powdery	SB-16-20	55	10
25		-gray-brown (10YR 5/3), no plasticity, slight orange mottling	SB-16-25	84	2
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-16

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		Dense Silt, dirt roadway, dark brown			
		SILT (ML), dark brown (10YR 4/4), moist, no plasticity, medium stiff, minor sand (10%).			
05			05		
			SB-17-5	45	ND/ND
		SILTY SAND (SP), orange-brown (10YR 6/8), moist, loose, .5-1.5mm, silt (15%).			
10			10		
			SB-17-10	40	20/2
15			15		
		SILT (ML), orange-brown (10YR 7/6), moist, low plasticity, medium stiff.			
			SB-17-15	55	ND/ND
20			20		
		-brown (10YR 6/4), soft			
			SB-17-20	40	--/ND
25			25		
		-soft, no recovery at 25 feet, no rings in sampler, bag sample only			
		-medium brown (10YR 5/3), no plasticity, stiff, slight gray mottling along fractures	SB-17-27	40	--/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.	30		
35			35		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [signature]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-17

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		ASPHALT			
		Dark SILT and mixed FILL			
		SILT (ML), brown (10YR 6/4), moist, no plasticity, soft.			
05			05		
			SB-18-5	24	60/15
10			10		
		-slight orange mottling and fractures	SB-18-10	55	30/7
		SAND (SP), orange-brown (10YR 6/2), .5-1mm, loose.			
15			15		
		SILT (ML), orange-brown (10YR 6/4), moist, low plasticity, medium stiff, uniform.	SB-18-15	55	5/ND
20			20		
		-platey and horizontal fractures	SB-18-20	100	ND/ND
25			25		
		-fractured	SB-18-25	75	ND/ND
		Bottom of boring at 26.5 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
30			30		
35			35		

EXPLANATION

- Clay
- Silt
- Sand
- Gravel

- Interval Sampled
- Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [illegible]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-18

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

02289 IAXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT (ML), medium brown, saturated from rain.			
05		-orange-brown (10YR 6/4), moist, no plasticity, soft, porous, root holes	SB-19-5	18	ND/ND
10		SAND (SP), medium brown (10YR 4/6), .5-1mm, loose, silt (10%).	SB-19-10	28	30/ND
15		SILT (ML), orange-brown (10YR 6/4), dry, no plasticity, soft.	SB-19-15	48	ND/ND
20		-low plasticity, medium stiff, platey	SB-19-20	60	--/ND
25		-no plasticity, fractures	SB-19-25	75	--/ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/03/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [signature]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-19

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

G2289 1AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		Boring drilled at 20° angle. Top soil near dirt roadway.			
		SILT (ML), dark brown (10YR 3/3), moist, medium plasticity, soft, minor fine sand (10%).			
05			05		
			SB-20-5	21	2/ND
10			10		
		-dark yellowish brown (10YR 4/6), dark gray mottling, minor fine sand (10%)	SB-20-10	71	--/ND
		SAND (SP), gray (5Y 6/1), moist, .5-2mm, loose, rounded.			
15			15		
			SB-20-15	73	ND/50
		SILT (ML), light grayish brown (10YR 5/2), dry, low plasticity, medium stiff.			
20			20		
			SB-20-20	80	ND/50
25			25		
		-olive/gray (5Y 4/3), slight orange staining			
			SB-20-25	1003	ND/10
30			30		
		-gray-brown (10YR 4/3), stiff, slight orange mottling			
			SB-20-30	100	ND/ND
35			35		

Continued

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-20

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT (ML), light brown-tan (10YR 5/4), dry, low plasticity, soft, uniform, no odor.	SB-20-35	100	ND/ND
40					
		SAND (SP), light brown (10YR 5/6), dry, .1-1mm, loose.			
45			SB-20-45	81	ND/20
50					
		-light brown (10YR 6/4), .5-2mm, subangular			
55			SB-20-55	81	ND/10
60					
		Bottom of boring at 60 feet.			
		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
65					
70					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/02/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [illegible]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-20 (CONTINUED)

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	OVA Value (ppm)
		Soft SILT, light tan, cobbles and weeds.			
		SANDY SILT (ML), dark gray-brown (10YR 3/2), moist, low plasticity, soft, organic debris, black staining, wires, nails and cobbles.			
05			SB-21-5	25	ND
		SAND (SP), orange-brown (10YR 4/6), moist, .5-2.5mm, loose, debris mixed in with organics, roots, minor silt.			
10			SB-21-10	25	20
15		-medium brown (10YR 4/4), 1-2mm, subangular, uniform	SB-21-15	42	ND
		SANDY SILT (ML), medium brown (10YR 5/3), dry, medium plasticity, stiff, minor fine sand (20%), uniform.			
20			SB-21-20	61	ND
25		-gray-tan (10YR 6/4), low plasticity, very stiff, slight orange and black mottling	SB-21-25	31	ND
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: [signature]

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-21

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID/OVA Values (ppm)
		SILT (ML), orange, weeds and roots.			
05		-dark orange-brown (10YR 4/6), dry, no plasticity, stiff	SB-22-5	36	40/–
10		SILT (ML), dark orange-brown (10YR 4/6), medium plasticity, soft, slight clay content (5%), fine sand (10%), high initial PID reading.	SB-22-10	42	400/ND
15		-gray (10YR 5/1), moist, low plasticity, medium stiff, flakey	SB-22-15	52	200/10
20		-gray (10YR 6/2), low plasticity, soft, powdery	SB-22-20	57	600/100
25		-gray (10YR 5/2), medium plasticity, medium stiff, some clay (15%)	SB-22-25	71	450/20
		Bottom of boring at 26.5 feet.			
30		Note: Boring backfilled with a bentonite grout slurry to approximately 1 foot below the ground surface and capped with a 1 foot concrete plug to ground surface. No ground water encountered.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 01/08/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: dcf

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-22

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

022891AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SILTY SAND & WEEDS			
		SILTY Fine SAND (SM), light orange/brown, dry, loose, subangular, sand 0.1 mm, silt <20%, organic fragments.			
05			05 SB-23-5	22	ND
10		-dark brown, silt <25%	10 SB-23-10	20	ND
15		-silt <10%	15 SB-23-15	30	ND
		Wood chips & metal fence fragments in cuttings. Driller reports hard drilling below 16 feet.			
		SILT (ML), light brown, dry stiff, very low plasticity, no fragments.			
20			20 SB-23-20	50	4.0
		CLAYEY SILT (ML), light brown, dry, stiff, low plasticity, no fragments.			
25			25 SB-23-25	83	ND
		Bottom of boring at 25.5 feet.			
		Note: Boring backfilled with bentonite chips.			
30			30		
35			35		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

ND = Not Detected

Date boring drilled: 07/17/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by: Jeff

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-23

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

0807 91AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SANDY SILT & WEEDS			
		SILTY SAND (SM), light brown, dry, loose, sand 0.1 to 0.2 mm, silt <10%, few organic fragments.			
05			05 SB-24-5	20	ND
10		-medium brown, medium loose, 0.1 to 0.5 mm, subangular	10 SB-24-10	47	ND
		- silt <10%, driller reports easy drilling			
15		SAND (SP), black, dry, loose, 0.1 to 0.2 mm	15 SB-24-15	82	ND
		SILT (ML), light gray, dry, soft, low plasticity, no fragments.			
20			20 SB-24-20	58	ND
		SILTY CLAY (CL), medium brown, dry, medium plastic, dense, silt <25%.			
25			25 SB-24-25	60	ND
		Bottom of boring at 25.5 feet.			
		Note: Boring backfilled with bentonite chips.			
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

ND = Not Detected

Date boring drilled: 07/17/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-24

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

080791AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SILTY SAND & WEEDS			
		SANDY SILT (ML), orange/brown, dry, no plasticity, dense, sand 0.1 to 0.2 mm <10%.			
05			SB-25-5	50	ND
10			SB-25-10	70	ND
		-sand <5%			
15		Bottom of boring at 15.5 feet.	SB-25-15	80	ND
		Note: Boring backfilled with bentonite chips. Hole stopped short due to native soil from surface to anticipated depth of sump.			
20					
25					
30					
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

ND = Not Detected

Date boring drilled: 07/17/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-25

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

080791AXS/lar

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SANDY SILT & WEEDS			
		SILTY SAND (SM), orange/brown, dry, dense, 0.1 to 0.2 mm, silt <10%.			
05			05		
10			10 SB-26-10	60	ND
15		SAND (SP), light brown, dry, loose, 0.1 to 0.3 mm.	15 SB-26-15	73	ND
		SILT (ML), no recovery.			
20			20 SB-26-20	50	ND
		Bottom of boring at 20.5 feet.			
		Note: Boring backfilled with bentonite chips.			
25			25		
30			30		
35			35		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

ND = Not Detected

Date boring drilled: 07/17/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-26

Project No. 2193
Jalk Fee-Santa Fe Springs

LEVINE•FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

080791AX5/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
		SANDY SILT (ML) with grass, dark gray.			
05		SILTY SAND (SM), black, moist, loose, sand <.1 mm, silt <35%, trace of clay, strong odor.	SB-27-5	11	677
		SANDY SILT (ML), olive/dark gray, moist, low plasticity, medium soft, sand <.1 mm <15%, two rings collected.			
10			SB-27-10	59	840
15		-medium stiff, sand <10%	SB-27-15	55-12"	870
		SANDY zone (driller reported)			
20		SILT (ML), light gray, slightly damp, low plasticity, medium stiff, trace of very fine sand <.05 mm <5%, platey.	SB-27-20	50-5"	389
25		-dry, stiff, no obvious odor	SB-27-25	90	29
30		-light brown/tan, no sand	SB-27-30	50-6"	14
		Bottom of boring at 30 feet.			
		Note: Boring backfilled with bentonite chips.			
35					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

Date boring drilled: 09/30/91

L•F Geologist/Engineer: S. A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORING SB-27

Project No. 2193
Jalk Fee-Santa Fe Springs

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

100391AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY: Description	SAMPLE DATA: Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Values (ppm)
	RB-1				
		SILT, SAND & WEEDS			
		SILTY SAND (SM), black , dry, loose, wire and broken glass.			
			RB-1-3	32	NR
5			5		
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-1-8	10	NR
10			10		
	RB-2				
		SAND, SILT & WEEDS			
		SANDY SILT (ML), black, dry, soft, no plasticity, charred wood fragments, sand 0.1 mm <10%.			
			RB-2-3	30	NR
5			5		
		-wires			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-2-8	10	NR
10			10		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained
NR = Not Recorded

Date boring drilled: 07/18/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-1 & RB-2

Project No. 2193
Jalk Fee-Santa Fe Springs

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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

030791AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
	RB-3				
		GRASS, SILT & SAND			
		SILT (ML), light brown , dry, stiff, no plasticity.			
			RB-3-3	64	NR
5					
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-3-8	82	NR
10					
	RB-4				
		SILT, SAND & WEEDS			
		SILT (ML), light brown/orange, dry, medium stiff, no plasticity.			
			RB-4-3	57	NR
5					
		-very stiff			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-4-8	90	NR
10					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained
NR = Not Recorded

Date boring drilled: 07/17/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-3 & RB-4

Project No. 2193
Jalk Fee-Santa Fe Springs

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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

080/91AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Value (ppm)
	RB-5				
		SAND, SILT & SAND			
		SANDY SILT (ML), gray/black, dry, soft, no plasticity, wood fragments, sand 0.1 mm <25%.			
			RB-5-3	10	NR
5					
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-5-8	30	NR
10					
	RB-6				
		SILT, SAND & WEEDS			
		SANDY SILT (ML), dark brown, dry, medium stiff, no plasticity, sand 0.1 mm <10%.			
			RB-6-3	35	NR
5					
		-stiff			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-6-8	50	NR
10					

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained
NR = Not Recorded

Date boring drilled: 07/18 & 17/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-5 & RB-6

Project No. 2193
Jalk Fee-Santa Fe Springs

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080/91AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	OVA Value (ppm)
	RB-7				
		GRASS, SILT & SAND			
		SANDY SILT (ML), medium brown, dry, soft, sand 0.1 mm <10%.			
			RB-7-3	23	70
5			5		
		-gray			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-7-8	87	ND
10			10		
	RB-8				
		SILT, SAND & WEEDS			
		SILT (ML), light orange/brown, dry, stiff, organic fragments.			
			RB-8-3	50	ND
5			5		
		-wires			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-8-8	41	ND
10			10		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained

ND = Not Detected

Date boring drilled: 07/18/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-7 & RB-8

Project No. 2193
Jalk Fee-Santa Fe Springs

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080/91AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY Description	Sample No. and Interval	SAMPLE DATA Penetration Rate (Blows/ft.)	OVA Value (ppm)
	RB-9				
		GRASS, SAND & SILT			
		SILTY SAND (SM), dark gray, dry, loose, sand 0.1 to 0.3 mm, subangular, silt <15%, organic fragments.			
			RB-9-3	8	ND
5			5		
		SAND (SP), black, dry, loose, 0.1 to 0.3 mm, subangular, seat cushion and wire in sampler.	RB-9-8	22	ND
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.			
10			10		
	RB-10				
		SILT (ML), light brown, dry, medium stiff, few fragments.			
			RB-10-3	33	ND
5			5		
		SANDY SILT (SM), gray, loose, sand .1 to .3 mm <20%.			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-10-8	24	100
10			10		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained
ND = Not Detected

Date boring drilled: 07/17 & 18/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-9 & RB-10

Project No. 2193
Jalk Fee-Santa Fe Springs

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080791AXS/ldr

Depth, feet	Graphic Log	LITHOLOGY Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	OVA Values (ppm)
	RB-11				
		SAND, SILT & WEEDS, dark cuttings			
		SILT (ML), light brown/orange, dry, loose, few wood fragments.			
			RB-11-3	31	ND
5			5		
		-black, wires and wood fragments			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-11-8		ND
10			10		
	RB-12				
		GRASS, SILT & SAND			
		SANDY SILT (ML), light brown, dry, stiff, no plasticity, duplicate sample taken.			
			RB-12-3	30	ND
5			5		
		-dark brown			
		Bottom of boring at 8.5 feet. Hole backfilled with bentonite chips.	RB-12-8	65	ND
10			10		

EXPLANATION

Clay
Silt
Sand
Gravel

Interval Sampled
Sample Retained
ND = Not Detected

Date boring drilled: 07/18 & 17/91

L•F Geologist/Engineer: Scott A. Armstrong

Approved by:

LITHOLOGY AND SAMPLE DATA FOR SOIL BORINGS RB-11 & RB-12

Project No. 2193
Jalk Fee-Santa Fe Springs

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080791AXS/ldr

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
Soil Borings							
SB1	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1	1	1
SB2	5						
	10						
	15			1	1		1
	20						
	25						
	30						
	35	1		1	1		
	40						
	45						
	50	1		1	1	1	
	55						
	60						
SB3	5						
	10						
	15	1		1	1		1
	20						
	25	1		1	1		1
	30						
SB4	5	1					
	10			1	1		1
	15						1
	20						
	25	1		1	1		
SB5	5						
	10	1		1	1		1
	15						1
	20						
	25	1		1	1		
SB6	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1		
SB7	5						
	10	1		1	1		1
	15		1				1
	20						
	25						
	30	1		1	1		
SB8	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1		1
SB9	5	2		2	2		2
	10						1
	15						
	20						
	25	1		1	1		1
SB10	5		1	1	1		
	10						
	15						
	20		1	1	1		
	25						
SB11	5	1		1	1		
	10						

numeric reviewer SAO

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193
Date: 1-25-91

Project Name: Mobil - Jalk Fee
Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
	15						
	20						
	25	1		1	1		
SB12	5						
	10	1	1	1	1		
	15						
	20	1		1	1		
	25		1				
SB13	5		1	1	1		
	10						
	15						
	20						
	25		2	2	2		
SB14	5		1	1	1		
	10						
	15	1		1	1		
	20						
	25	2		2	2		
SB15	5	1		1	1		
	10		1				
	15						
	20	1		1	1		
	25		1				
SB16	5						
	10						
	15	1		1	1		
	20						
	25	1		1	1		
SB17	5	1		1	1		
	10						
	15						
	20	1		1	1		
	27						
SB18	5	1	1	1	1		
	10						
	15						
	20						
	25	2	2	2	2		
SB19	5						
	10		1	1	1		
	15		1	1	1		
	20						
	25						
SB20	5						
	10						
	15		1	1	1		
	20						
	25						
	30						
	35						
	40						
	45						
	50						
	55		1	1	1		
SB21	5						
	10						
	15	1		1	1		1
	20						
	25	1		1	1		1
SB22	5						
	10		1	1	1		

numeric reviewer S.Yo

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
	15						
	20						
	25		2	2	2		
SB23	5						
	10						2
	15						
	20						
	25						2
SB24	5						
	1						
	15						2
	20						
	25						1
SB25	5						1
	10						
	15						1
SB26	10						
	15						
SB27	5						
	10						
	15	1			1		
	20						
	25						
	30	1			1		
Test Pits							
T1A-1	4			1			
T1A-4	2.5			1	1		
T1B-1	4	1		1			
T1B-2	4			1			
T1B-4	4			1			
T2A-1	4.5				1		
T2A-2	3	1					
T2B-1	4.5			1	1		
T2B-2	4.5			1			
T2B-6	3			1			
T3B-1	5	1					1
T3B-4	4				1		
T3B-10	4			1	1		
T4A-2	3				1		
T4A-3	3			1	1		
T4B-1A	3			1	1		
T4B-1B	3			1			
T4B-3	3			1	1		
T5A-1	5				1		
T5A-3	5	1					
T5B-2A	6	1			1		
T5B-2B	5						1
T5B-2C	5			1			
T5B-2D	6			1			
SUMP-5-DRUM	3						
T6A-3	5			1	1		
T6A-6	3						
T6A-7	3.5	1					
T6A-8	6.5			1			
T6B-7A	6			1	1		1
T6B-7B	5				1		
T7A-1	5			1	1		1
T7A-1N	5	1					
T7A-1S	4			1			
T7B-3	5						
T7B-5	6						
T7C-1	5				1		
T7C-2	5				1		
T8A-1	3	1					1
T8A-2	3.5			1			
T8B-1	3						

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APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
T8B-2				1	2		
T8B-2a	3						
T8B-2b	4						
T9A-1a	4	1		1	1		
T9A-1b	4	1		1	1		
T9B-1	5	1		1	1		
T9A-2	5	1		1	1		
T9A-3	5	1		1	1		
TLA-1	3	1					1
TLA-2	3						
TLA-3	3	1					1
TLB-1	3			1	1		
TLB-5	3	1		1			
Perimeter Sampling							
SS-1	NA	1		1	1		
SS-2	NA	1		1	1		
SS-3	NA	1		1	1		
SS-4	NA	1		1	1		
SS-5	NA	1		1	1		
SS-6	NA	1		1	1		
SS-7	NA	1		1	1		
SS-8	NA	1		1	1		
SS-9	NA	1		1	1		
SS-10	NA		1	1	1		
SS-11	NA		1	1	1		
SS-12	NA		1	1	1		
SS-13	NA	1		1	1		
Random Borings							
RB1	3						1
	8						1
RB2	3						1
	8						1
RB3	3						
	8						1
RB4	3						1
	8						1
RB5	3						1
	8						1
RB6	3						1
	8						
RB7	3						1
	8						
RB8	3						1
	8						1
RB9	3						1
	8						1
RB10	3						1
	8						1
RB11	3						1
	8						1
RB12	3						
	8						1
Totals		65	24	93	91	2	56

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06-Dec-91

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
Soil Borings							
SB1	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1	1	1
SB2	5						
	10						
	15			1	1		1
	20						
	25						
	30						
	35	1		1	1		
	40						
	45						
	50	1		1	1	1	
	55						
	60						
SB3	5						
	10						
	15	1		1	1		1
	20						
	25	1		1	1		1
	30						
SB4	5	1					
	10			1	1		1
	15						1
	20						
	25	1		1	1		
SB5	5						
	10	1		1	1		1
	15						1
	20						
	25	1		1	1		
SB6	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1		
SB7	5						
	10	1		1	1		1
	15		1				1
	20						
	25						
	30	1		1	1		
SB8	5						
	10	1		1	1		1
	15						
	20						
	25	1		1	1		1
SB9	5	2		2	2		2
	10						1
	15						
	20						
	25	1		1	1		1
SB10	5		1	1	1		
	10						
	15						
	20		1	1	1		
	25						
SB11	5	1		1	1		
	10						

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06-Dec-91

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193
Date: 1-25-91

Project Name: Mobil - Jalk Fee
Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
	15						
	20						
	25	1		1	1		
SB12	5						
	10	1	1	1	1		
	15						
	20	1		1	1		
	25		1				
SB13	5		1	1	1		
	10						
	15						
	20						
	25		2	2	2		
SB14	5		1	1	1		
	10						
	15	1		1	1		
	20						
	25	2		2	2		
SB15	5	1		1	1		
	10		1				
	15						
	20	1		1	1		
	25		1				
SB16	5						
	10						
	15	1		1	1		
	20						
	25	1		1	1		
SB17	5	1		1	1		
	10						
	15						
	20	1		1	1		
	27						
SB18	5	1	1	1	1		
	10						
	15						
	20						
	25	2	2	2	2		
SB19	5						
	10		1	1	1		
	15		1	1	1		
	20						
	25						
SB20	5						
	10						
	15		1	1	1		
	20						
	25						
	30						
	35						
	40						
	45						
	50						
	55		1	1	1		
SB21	5						
	10						
	15	1		1	1		1
	20						
	25	1		1	1		1
SB22	5						
	10		1	1	1		

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06-Dec-91

APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
	15						
	20						
	25		2	2	2		
SB23	5						
	10						2
	15						
	20						
	25						2
SB24	5						
	1						
	15						2
	20						
	25						1
SB25	5						1
	10						
	15						1
SB26	10						
	15						
SB27	5						
	10						
	15	1			1		
	20						
	25						
	30	1			1		
Test Pits							
T1A-1	4			1			
T1A-4	2.5			1	1		
T1B-1	4	1		1			
T1B-2	4			1			
T1B-4	4			1			
T2A-1	4.5				1		
T2A-2	3	1					
T2B-1	4.5			1	1		
T2B-2	4.5			1			
T2B-6	3			1			
T3B-1	5	1					1
T3B-4	4				1		
T3B-10	4			1	1		
T4A-2	3				1		
T4A-3	3			1	1		
T4B-1A	3			1	1		
T4B-1B	3			1			
T4B-3	3			1	1		
T5A-1	5				1		
T5A-3	5	1					
T5B-2A	6	1			1		
T5B-2B	5						1
T5B-2C	5			1			
T5B-2D	6			1			
SUMP-5-DRUM	3						
T6A-3	5			1	1		
T6A-6	3						
T6A-7	3.5	1					
T6A-8	6.5			1			
T6B-7A	6			1	1		1
T6B-7B	5				1		
T7A-1	5			1	1		1
T7A-1N	5	1					
T7A-1S	4			1			
T7B-3	5						
T7B-5	6						
T7C-1	5				1		
T7C-2	5				1		
T8A-1	3	1					1
T8A-2	3.5			1			
T8B-1	3						

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APPENDIX J
CHEMICAL ANALYSIS MANAGEMENT SHEET

Project No.: 2193 Project Name: Mobil - Jalk Fee
Date: 1-25-91 Author: SAA

	Sample Depth (feet)	analyses requested					
		8260	8020	418.1	M8015	8270	TITLE 22 CCR
T8B-2				1	2		
T8B-2a	3						
T8B-2b	4						
T9A-1a	4	1		1	1		
T9A-1b	4	1		1	1		
T9B-1	5	1		1	1		
T9A-2	5	1		1	1		
T9A-3	5	1		1	1		
TLA-1	3	1					1
TLA-2	3						
TLA-3	3	1					1
TLB-1	3			1	1		
TLB-5	3	1		1			
Perimeter Sampling							
SS-1	NA	1		1	1		
SS-2	NA	1		1	1		
SS-3	NA	1		1	1		
SS-4	NA	1		1	1		
SS-5	NA	1		1	1		
SS-6	NA	1		1	1		
SS-7	NA	1		1	1		
SS-8	NA	1		1	1		
SS-9	NA	1		1	1		
SS-10	NA		1	1	1		
SS-11	NA		1	1	1		
SS-12	NA		1	1	1		
SS-13	NA	1		1	1		
Random Borings							
RB1	3						1
	8						1
RB2	3						1
	8						1
RB3	3						
	8						1
RB4	3						1
	8						1
RB5	3						1
	8						1
RB6	3						1
	8						
RB7	3						1
	8						
RB8	3						1
	8						1
RB9	3						1
	8						1
RB10	3						1
	8						1
RB11	3						1
	8						1
RB12	3						
	8						1
Totals		65	24	93	91	2	56

numeric reviewer SAA

06-Dec-91

TABLE L-1

Comparison of EPA Method 418.1 and EPA Method 8015 (Modified)

Analytical Results On Selected Soil Sample Results

LF 2193

(results reported in parts per million - ppm)

Sample Identification	Modified EPA Method 8015						EPA Method 418.1
	C5-C10	C7-C20	C10-C20	C5-C30	C20-C30	Subtotal	
Perimeter Sampling (NW Property Boundary)							
SS-1	---	---	520	---	200	720	2000
SS-2	---	---	---	---	280	280	1100
SS-3	---	---	9500	---	3900	13400	15000
Perimeter Sampling (NE Property Boundary)							
SS-4	---	---	---	---	800	800	800
SS-5	---	---	---	---	220	220	420
SS-6	---	---	---	---	---	ND	ND
SS-7	1200*	---	---	---	3000	3000	2100
SS-8	---	---	---	---	600	600	310
SS-9	---	---	---	---		ND	30
Perimeter Sampling (SE Property Boundary)							
SS-10	---	---	---	---	120	120	300
SS-11	220	---	---	---	4000	4220	1400
SS-12	---	---	---	---	31000	31000	1300
SS-13	---	---	---	---	---	ND	140
Former Above Ground Storage Tank Area							
T3B-10	---	7400	---	---	1800	9200	9900
T5A-1	---	---	---	---	200	200	ND
T9A-1a	4300	---	890	---	340	5530	3600
T9A-1b	---	---	---	---	---	ND	29
SB-3-15	---	---	---	8400	---	8400	6100
SB-27-30	---	---	---	29000	---	29000	NA
SS-12	---	---	---	---	31000	31000	1300
SS-13	---	---	---	---	---	ND	140
Isolated Samples							
T4B-1a	---	1700	---	---	390	2090	4000
T1A-4	---	---	---	---	110	110	180
T5A-1	---	---	---	---	200	200	NA
T7A-1	---	---	---	---	1500	1500	1000

ND Not Detected above laboratory method detection limits

NA Not Analyzed

C5-C10 Gasoline

C7-C20 Undifferentiated Hydrocarbons

C10-C20 Diesel Fuel

C5-C30 Undifferentiated Total Hydrocarbons

C20-C30 Heavy Hydrocarbons

--- Hydrocarbon range not detected in sample above laboratory detection limits

*C7-C12 Mineral Spirits

TABLE 1
Soil Sample Analytical Results
Modified EPA Method 8015
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons	Breakdown of Hydrocarbon Ranges
Test Pit Samples				
T1A-4	12/20/90	2.5	110	110*
T2A-1	12/20/90	4.5	ND	ND
T2B-1	12/20/90	4.5	ND	ND
T3B-4	12/20/90	4	ND	ND
T3B-10	12/20/90	5	9200	1800*; 7400**
T4A-2	12/20/90	3	ND	ND
T4A-3	12/20/90	3	ND	ND
T4B-1A	12/20/90	3	2090	390*; 1700**
T4B-3	12/20/90	3	ND	ND
T5A-1	12/19/90	5	200	200*
T5B-2A	12/19/90	6	ND	ND
T6A-3	12/19/90	5	ND	ND
T6B-7A	12/19/90	6	ND	ND
T6B-7B	12/19/90	5	ND	ND
T7A-1	12/19/90	5	1500	1500*
T7C-1	12/19/90	5	ND	ND
T7C-2	12/19/90	5	ND	ND
T8B-2A	12/19/90	3.5	ND	ND
T8B-2B	12/20/90	3	ND	ND
TLB-1	12/20/90	3	ND	ND
T9A-1A	07/19/91	4	5530	340*; 890+; 4300τ
T9A-1B	07/19/91	5	ND	ND
T9A-2	07/19/91	5	ND	ND
T9A-3	07/19/91	5	ND	ND
T9B-1	07/19/91	5	ND	ND
Soil Borings				
SB1-10	01/08/91	11	ND	ND
SB1-25	01/08/91	26	ND	ND
SB2-15	01/02/91	15	ND	ND
SB2-35	01/02/91	35	ND	ND
SB2-50	01/02/91	50	ND	ND
SB3-15	01/08/91	16	8400	8400***
SB3-25	01/08/91	26	ND	ND
SB4-10	01/03/91	11	ND	ND
SB4-25	01/03/91	26	ND	ND
SB5-10	01/03/91	11	ND	ND
SB5-25	01/03/91	26	ND	ND
SB6-10	01/03/91	11	ND	ND
SB6-25	01/03/91	26	ND	ND
SB7-10	01/03/91	11	ND	ND
SB7-30	01/03/91	31	ND	ND

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25-Oct-91

TABLE 1
Soil Sample Analytical Results
Modified EPA Method 8015
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons	Breakdown of Hydrocarbon Ranges
SB8-10	01/08/91	11	ND	ND
SB8-25	01/08/91	26	ND	ND
SB9-5	01/08/91	6	ND	ND
SB9-5(QA/QC)	01/08/91	6	ND	ND
SB9-25	01/08/91	26	ND	ND
SB10-5	01/02/91	5	ND	ND
SB10-20	01/02/91	20	ND	ND
SB11-5	01/02/91	5	ND	ND
SB11-25	01/02/91	25	ND	ND
SB12-10	01/02/91	10	ND	ND
SB12-20	01/02/91	20	ND	ND
SB13-5	01/02/91	6	ND	ND
SB13-25	01/02/91	26	ND	ND
SB13-25(QA/QC)	01/02/91	26	ND	ND
SB14-5	01/08/91	5	ND	ND
SB14-15	01/08/91	15	ND	ND
SB14-25	01/08/91	25	ND	ND
SB14-25(QA/QC)	01/08/91	25	ND	ND
SB15-5	01/08/91	6	ND	ND
SB15-20	01/08/91	21	ND	ND
SB16-15	01/08/91	16	ND	ND
SB16-25	01/08/91	26	ND	ND
SB17-5	01/03/91	6	ND	ND
SB17-20	01/03/91	21	ND	ND
SB18-5	01/03/91	6	ND	ND
SB18-25	01/03/91	26	ND	ND
SB18-25(QA/QC)	01/02/91	26	ND	ND
SB19-10	01/03/91	11	ND	ND
SB19-15	01/03/91	16	ND	ND
SB20-15	01/08/91	16	ND	ND
SB20-55	01/08/91	56	ND	ND
SB21-15	01/08/91	16	ND	ND
SB21-25	01/08/91	26	ND	ND
SB22-10	01/08/91	11	ND	ND
SB22-25	01/08/91	26	ND	ND
SB22-25(QA/QC)	01/08/91	26	ND	ND
SB27-15	09/30/91	15	29000	29000***
SB27-30	09/30/91	30	ND	ND
Perimeter Sampling				
SS-1	07/19/91	4.5	720	200*; 520+
SS-2	07/19/91	3	280	280*
SS-3	07/19/91	2.5	13400	3900*; 9500+

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25-Oct-91

TABLE 1
Soil Sample Analytical Results
Modified EPA Method 8015
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons	Breakdown of Hydrocarbon Ranges
SS-4	07/18/91	3	800	800*
SS-5	07/18/91	2	220	220*
SS-6	07/18/91	2.5	ND	ND
SS-7	07/18/91	2.5	4200	3000*; 1200¥
SS-8	07/18/91	2	600	600*
SS-9	07/18/91	2	ND	ND
SS-10	07/18/91	2.5	120	120*
SS-11	07/18/91	3	4220	4000*; 220τ
SS-12	07/18/91	3.5	31000	31000*
SS-13	07/18/91	4	ND	ND

NOTES: ND = Not Detected (above each chemical constituent method detection limit).
* = Heavy Hydrocarbons (C20-C30)
** = Undifferentiated Hydrocarbons (C7-C20)
*** = Total Hydrocarbons (C5-C30)
+ = Diesel Fuel (C10-C20)
τ = Gasoline (C5-C10)
¥ = Mineral Spirits (C7-C12)
(QA/QC) = Quality Assurance/Quality Control
Modified EPA Method 8015: Laboratory method detection limits vary with each fuel hydrocarbon (i.e., carbon chain length). Refer to laboratory data sheets in Appendix I for specific detection limits.

TABLE 2
Soil Sample Analytical Results
EPA Method 418.1
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons
Test Pit Samples			
T1A-1	12/20/90	4	ND
T1A-4	12/20/90	2.5	180
T1B-2	12/20/90	4	ND
T1B-4	12/20/90	4	ND
T2B-1	12/20/90	4.5	ND
T2B-2	12/20/90	4.5	28
T2B-6	12/20/90	3	ND
T3B-10	12/20/90	5	9900
T4A-3	12/20/90	3	ND
T4B-1A	12/20/90	3	4000
T4B-1B	12/20/90	3	ND
T4B-3	12/20/90	3	12
T5B-2C	12/19/90	5	ND
T5B-2D	12/19/90	6	ND
T6A-3	12/19/90	5	ND
T6A-8	12/19/90	6.5	ND
T6B-7A	12/19/90	6	ND
T7A-1	12/17/90	5	1000
T7A-1S	12/19/90	4	ND
T8A-2	12/17/90	3.5	ND
T8B-2A	12/17/90	3.5	ND
TLB-1	12/20/90	3	90
TLB-5	12/20/90	3	49
T9A-1A	7/19/91	4	3600
T9A-1B	7/19/91	4	29
T9A-2	7/19/91	5	ND
T9A-3	7/19/91	5	ND
T9B-1	7/19/91	5	ND
Soil Borings			
SB1-10	1/8/91	11	ND
SB1-25	1/8/91	26	ND
SB2-15	1/2/91	15	ND
SB2-35	1/2/91	35	ND
SB2-50	1/2/91	50	ND
SB3-15	1/8/91	16	6100
SB3-25	1/8/91	26	ND
SB4-10	1/3/91	11	ND
SB4-25	1/3/91	26	ND
SB5-10	1/3/91	11	ND
SB5-25	1/3/91	26	ND
SB6-10	1/3/91	11	ND

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TABLE 2
Soil Sample Analytical Results
EPA Method 418.1
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons
SB6-25	1/3/91	26	ND
SB7-10	1/3/91	11	ND
SB7-30	1/3/91	31	ND
SB8-10	1/8/91	11	280
SB8-25	1/8/91	26	ND
SB9-5	1/8/91	6	ND
SB9-5(QA/QC)	1/8/91	6	11
SB9-25	1/8/91	26	ND
SB10-5	1/2/91	5	13
SB10-20	1/2/91	20	ND
SB11-5	1/2/91	5	ND
SB11-25	1/2/91	25	16
SB12-10	1/2/91	10	ND
SB12-20	1/2/91	20	ND
SB13-5	1/2/91	5	ND
SB13-25	1/2/91	25	ND
SB13-25(QA/QC)	1/2/91	25	ND
SB14-5	1/8/91	5	ND
SB14-15	1/8/91	15	ND
SB14-25	1/8/91	25	ND
SB14-25(QA/QC)	1/8/91	25	ND
SB15-5	1/3/91	6	ND
SB15-20	1/3/91	21	ND
SB16-15	1/8/91	16	ND
SB16-25	1/8/91	26	ND
SB17-5	1/3/91	6	ND
SB17-20	1/3/91	21	ND
SB18-5	1/3/91	6	ND
SB18-25	1/3/91	26	ND
SB18-25(QA/QC)	1/3/91	26	ND
SB19-10	1/3/91	11	ND
SB19-15	1/3/91	16	ND
SB20-15	1/8/91	16	ND
SB20-55	1/8/91	56	ND
SB21-15	1/8/91	16	ND
SB21-25	1/8/91	26	ND
SB22-10	1/8/91	11	ND
SB22-25	1/8/91	26	ND
SB22-25(QA/QC)	1/8/91	26	ND
Perimeter Sampling			
SS-1	7/19/91	4.5	2000
SS-2	7/19/91	3	1100

numeric reviewer MCS

25-Oct-

TABLE 2
Soil Sample Analytical Results
EPA Method 418.1
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Total Petroleum Hydrocarbons
SS-3	7/19/91	2.5	15000
SS-4	7/18/91	3	800
SS-5	7/18/91	2	420
SS-6	7/18/91	2.5	ND
SS-7	7/18/91	2.5	2100
SS-8	7/18/91	2	310
SS-9	7/18/91	2	30
SS-10	7/18/91	2.5	300
SS-11	7/18/91	3	1400
SS-12	7/18/91	3.5	1300
SS-13	7/18/91	4	140

Notes: ND = Not detected above laboratory method detection limits

TABLE 3
Soil Sample Analytical Results
EPA Method 8260
LF 2193
(results reported in parts per million - ppm)

Sample Location	Sample Date	Sample Depth	TCE	PCE	DCE	Methylene Chloride	Other Compounds
Test Pit Samples							
T1B-1	12/20/90	4	ND	ND	ND	ND	
T2A-2	12/20/90	3	ND	ND	ND	ND	
T3B-1	12/20/90	5	ND	ND	ND	ND	Toluene 0.013
T5A-3	12/19/90	5	ND	ND	ND	ND	
T5B-2A	12/19/90	6	ND	ND	ND	ND	
T6A-7	12/19/90	3.5	ND	ND	ND	ND	
T7A-1N	12/17/90	5	ND	ND	ND	ND	Toluene 0.008
T8A-1	12/17/90	3	ND	ND	ND	ND	Toluene 0.008
TLA-1	12/20/90	3	ND	ND	ND	ND	
TLA-3	12/20/90	3	ND	ND	ND	ND	
TLB-5	12/20/90	3	ND	ND	ND	ND	
T9A-1A	07/19/91	4	10	2500	7.9	3.6	Benzene 9.3; Xylenes 10; Carbon Disulfide* 5.5; Ethylbenzene 1.5; Toluene 3.5; (C9-C10) 10; (C6-C11) 200
T9A-1B	07/19/91	4	ND	0.32	ND	0.009*	
T9B-1	07/19/91	5	ND	ND	ND	0.007*	Carbon Disulfide* 0.014
T9A-2	07/19/91	5	ND	ND	ND	ND	
T9A-3	07/19/91	5	ND	ND	ND	0.024*	Carbon Disulfide* 0.017; (C10-C12) 0.4
Soil Borings							
SB1-10	01/08/91	11	ND	ND	ND	ND	
SB1-25	01/08/91	26	ND	ND	ND	ND	
SB2-35	01/02/91	35	ND	ND	ND	ND	
SB2-50	01/02/91	50	ND	ND	ND	ND	
SB3-15	01/08/91	16	15	430	ND	ND	(C8-C11) 300
SB3-25	01/08/91	26	ND	ND	ND	ND	
SB4-5	01/03/91	6	ND	ND	ND	ND	
SB4-25	01/03/91	26	ND	ND	ND	ND	
SB5-10	01/03/91	11	ND	ND	ND	ND	
SB5-25	01/03/91	25	ND	ND	ND	ND	
SB6-10	01/03/91	11	ND	ND	ND	ND	
SB6-25	01/03/91	26	ND	ND	ND	ND	
SB7-10	01/03/91	11	ND	ND	ND	ND	
SB7-30	01/03/91	31	ND	ND	ND	ND	
SB8-10	01/08/91	11	ND	ND	ND	ND	
SB8-25	01/08/91	26	ND	ND	ND	ND	
SB9-5	01/08/91	6	ND	ND	ND	0.048	
SB9-25	01/08/91	26	ND	ND	ND	0.047	
SB11-5	01/02/91	5	ND	ND	ND	ND	
SB11-25	01/02/91	25	ND	ND	ND	ND	
SB12-10	01/02/91	10	ND	ND	ND	ND	
SB12-20	01/02/91	20	ND	ND	ND	ND	
SB14-15	01/08/91	15	ND	ND	ND	0.034	
SB14-25	01/08/91	25	ND	ND	0.04	ND	
SB14-25 (QA/QC)	01/08/91	25	ND	ND	ND	ND	
SB15-5	01/03/91	6	ND	ND	ND	ND	
SB15-20	01/03/91	21	ND	ND	ND	ND	
SB16-15	01/08/91	16	ND	ND	ND	ND	
SB16-25	01/08/91	26	ND	ND	ND	ND	
SB17-5	01/03/91	6	ND	ND	ND	ND	
SB17-20	01/03/91	21	ND	ND	ND	ND	
SB18-5	01/03/91	6	ND	ND	ND	ND	
SB18-25	01/03/91	26	ND	ND	ND	ND	
SB18-25 (QA/QC)	01/03/91	26	ND	ND	ND	ND	
SB21-15	01/08/91	16	ND	ND	ND	ND	
SB21-25	01/08/91	26	ND	ND	ND	ND	
SB27-15	09/30/91	15	ND	ND	53	2*	Benzene 2; Naphthalene 5; Methylnaphthalenes 8; Dimethylnaphthalenes 6; C9-C11 alkylbenzenes 300; C5-C12 aliphatic & alicyclic hydrocarbons 1000
SB27-30	09/30/91	30	ND	ND	0.02	0.03	

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29-Oct-

TABLE 3
Soil Sample Analytical Results
EPA Method 8260
LF 2193
(results reported in parts per million - ppm)

Sample Location	Sample Date	Sample Depth	TCE	PCE	DCE	Methylene Chloride	Other Compounds
Perimeter Sampling							
SS-1	07/19/91	4.5	ND	0.037	0.009	0.008*	
SS-2	07/19/91	3	ND	ND	ND	0.014*	Carbon Disulfide* 0.008
SS-3	07/19/91	2.5	ND	ND	ND	0.008*	Carbon Disulfide* 0.015
SS-4	07/18/91	3	ND	ND	ND	0.007*	Carbon Disulfide* 0.005
SS-5	07/18/91	2	ND	ND	ND	0.008*	Carbon Disulfide* 0.005
SS-6	07/18/91	2.5	ND	ND	ND	0.007*	Carbon Disulfide* 0.005
SS-7	07/18/91	2.5	ND	ND	ND	0.007*	Acetone 0.091; MEK 0.036; Ethylbenzene 0.041; Toluene 0.012; Xylenes 0.96; C9-C10 0.9; C7-C11 10; Unidentified 0.3
SS-8	07/18/91	2	ND	ND	ND	0.005*	
SS-9	07/18/91	2	ND	ND	ND	0.007*	Carbon Disulfide* 0.006
SS-13	07/18/91	4	ND	1.3	ND	ND	

NOTES:
ND = Not detected above laboratory method detection limits
TCE = Trichloroethylene
PCE = Tetrachloroethylene
DCE = Cis-1,1-dichloroethylene
MEK = methyl ethyl ketone (2-Butanone)
(C6-C11) = Aliphatic and Alicyclic Hydrocarbons
(C8-C11) = Undifferentiated C8 through C11 aliphatic and alicyclic hydrocarbons
(C9-C10) = Alkylbenzenes
(C10-C12) = Aliphatic and Alicyclic Hydrocarbons
(QA/QC) = Quality Assurance/Quality Control Sample (using comparable soil sample under 8240 analysis)
* = Carbon Disulfide and Methylene Chloride were identified in the Laboratory Blank Samples

EPA Method 8260: Of the volatile organic compounds analyzed, TCE, PCE, DCE and Methylene Chloride were the only chemical constituents detected at concentrations above the laboratory's test method detection limits.

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29-Oct-

TABLE 4
Soil Sample Analytical Results
EPA Method 8020
LF 2193
(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth	Benzene	Toluene	Xylenes	Ethylbenzene
Soil Borings						
SB7-15	1/3/91	16	ND	ND	ND	ND
SB10-5	1/2/91	5	ND	0.001	0.009	0.002
SB10-20	1/2/91	20	ND	0.001	0.006	0.002
SB12-10	1/2/91	10	ND	ND	0.003	ND
SB12-25	1/2/91	25	ND	0.002	0.003	0.001
SB13-5	1/2/91	5	ND	ND	0.002	ND
SB13-25	1/2/91	25	ND	ND	ND	ND
SB13-25(QA/QC)	1/2/91	25	ND	ND	ND	ND
SB14-5	1/8/91	5	ND	ND	ND	ND
SB15-10	1/3/91	11	ND	ND	0.066	0.008
SB15-25	1/3/91	26	ND	ND	ND	ND
SB18-5	1/3/91	6	ND	ND	ND	ND
SB18-25	1/3/91	26	ND	ND	ND	ND
SB18-25(QA/QC)	1/3/91	26	ND	ND	ND	ND
SB19-10	1/3/91	11	ND	ND	ND	ND
SB19-15	1/3/91	16	ND	ND	0.006	ND
SB20-15	1/8/91	16	ND	ND	ND	ND
SB20-55	1/8/91	56	ND	ND	ND	ND
SB22-10	1/8/91	11	0.001	0.002	0.001	ND
SB22-25	1/8/91	26	0.018	0.004	0.004	ND
SB22-25(QA/QC)	1/8/91	26	ND	ND	ND	ND
Perimeter Sampling						
SS-10	07/18/91	2.5	ND	ND	ND	ND
SS-11	07/18/91	3.0	ND	ND	ND	ND
SS-12	07/18/91	3.5	ND	ND	ND	ND

NOTES:

ND = Not Detected Above Laboratory Test Method Detection Limits

(QA/QC) = Quality Assurance/Quality Control Sample (A Comparable Soil Sample)

TABLE 5
Soil Sample Analytical Results
EPA Method 8270
LF 2193
(results reported in parts per million -ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Concentration of Semi-Volatile Organics
Soil Borings			
SB1-25	01/08/91	26	ND
SB2-50	01/02/91	50	ND

Notes: ND = not detected above laboratory test method detection limits

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10-Oct-91

TABLE 6
Soil Sample Analytical Results
Title 22 CCR Metals
LF 2193
(results reported in parts per million - ppm)

Sample Location	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III/IV)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Boneyard Samples																		
RB1-3	7/18/91	16	14	1440**	0.57	5.88	46.3	9.23	440**	1090*	ND	1.5	21	1.4	0.38	0.11	45.2	5490*
RB1-8	7/18/91	32.6	9	2700**	0.54	11.8**	52.9**	12.7	627**	1750*	ND	1.18	32	10	0.47	0.06	32	10000*
RB2-3	7/18/91	2.8	4	135	0.53	0.94	23.6	7.39	30.5	530**	2.82**	0.35	15.2	3	0.07	0.13	39	216
RB2-8	7/18/91	2.6	4	824	0.69	1.43	29.9	8.78	142	150**	0.2	0.41	29.6	ND	0.20	0.16	42	956
RB3-8	7/17/91	1	11	190	0.98	ND	38.7	18.9	35.2	10.4	ND	0.53	28.7	ND	ND	0.15	63	64.4
RB4-3	7/17/91	0.5	3	105	0.45	ND	22.7	7.62	13.6	5.02	ND	0.35	17.2	ND	ND	0.12	41	44.8
RB4-8	7/17/91	1	11	147	0.62	ND	38.8	14.5	33.7	10.1	ND	0.26	23.8	ND	0.03	0.18	55	57.8
RB5-3	7/18/91	5.3	19	610	0.41	3.19	30.9	9.36	112	450**	3.11**	1.45	24.2	2	0.20	0.14	43	1220
RB5-8	7/18/91	9	89**	585	0.51	3.32	89.8**	11.1	71.5	692**	34.1*	1	58.4	3.5	0.17	0.14	42	1720
RB6-3	7/17/91	0.3	3	103	0.5	ND	20.5	7.05	15.1	4.47	ND	0.21	15.6	ND	0.04	0.1	36	45.5
RB7-3	7/18/91	1.6	5	199	0.59	0.09	24.0	7.79	21.3	15.6	ND	0.56	17.1	ND	0.08	0.08	44	94
RB8-3	7/18/91	1.0	5	109	0.59	0.09	25.9	9.22	17.6	6.9	ND	0.43	17.9	ND	0.04	0.15	49	59
RB8-8	7/18/91	1.2	8	113	0.64	ND	33.2	13	28.4	8.2	ND	0.19	20.2	ND	ND	0.13	56	57
RB9-3	7/17/91	5.9	16	332	0.42	0.66	61.8**	12.4	160	180**	0.9	2.53	42	4	0.13	0.12	44	2300
RB9-8	7/17/91	10	12	695	0.52	4.3	57.5**	11.4	130	1150*	2.49**	2.3	33.7	7.4	0.26	0.11	46	1880
RB10-3	7/18/91	1.2	8	121	0.41	0.19	23.6	8.68	21.5	27	ND	0.56	16.9	2	0.02	0.14	44	334
RB10-8	7/18/91	0.9	4	109	0.28	0.17	26.1	7.53	36.7	31.5	ND	0.78	34.3	ND	ND	0.12	39	162
RB11-3	7/18/91	2	4	99.2	0.57	0.09	22.9	7.9	17.1	10.3	ND	0.3	15.3	ND	ND	0.12	41	58
RB11-8	7/18/91	6.1	5	460	0.39	1.55	32.2	7.90	1500**	344**	10.1**	0.80	16.6	3	0.20	0.11	35	1000
RB12-8	7/17/91	0.7	4	97.4	0.45	ND	24.4	8.11	18.5	5.06	ND	0.47	16.8	ND	0.06	0.09	39	50.5
Title 22 Standards																		
TTLC	- -	500	500	10000	75	100	2500/500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000
10 times STLC*	- -	150	50	1000	7.5	10	5600/50	800	250	50	2	3500	200	10	50	70	240	2500

NOTES:
- ND = Not detected above laboratory test method detection limits
- (QA/QC) = Quality Assurance/Quality Control Sample (a comparable soil sample)
- DUP = Duplicate
- TTLC = Total Threshold Limit Concentration
- STLC = Soluble Threshold Limit Concentration
- * = exceeds TTLC
- ** = exceeds 10x STLC

TABLE 6
Soil Sample Analytical Results
Title 22 CCR Metals
LF 2193
(results reported in parts per million - ppm)

Sample Location	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III/IV)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Test Pit Samples																		
T3B-1	12/20/90	1.24	4	137	0.49	0.33	27.2	9.26	39.5	38.5	0.04	0.93	22.3	0.7	0.06	0.15	49	113
T5B-2B	12/20/90	0.79	4	129	0.46	0.16	24.9	8.22	32.9	5.5	0.04	0.2	16.6	0.7	0.04	0.12	45	55.9
T6B-7A	12/20/90	0.78	5	98	0.36	0.06	23.8	10.6	18.9	5.6	0.03	0.23	14.5	ND	ND	0.13	44	46.3
T7A-1	12/20/90	0.72	4	102	0.31	0.42	22.4	8.26	26	128**	0.04	0.68	17.1	0.8	0.03	0.15	41	87.3
T8A-1	12/20/90	0.83	4	103	0.31	0.07	22.1	8.61	80.5	15.7	ND	0.29	14.5	0.8	0.05	0.13	41	76.1
TLA-1	12/20/90	8.97	7	980	0.46	3.64	32.5	9.86	267**	600**	0.15	0.93	20.4	2	0.27	0.11	46	2400
TLA-3	12/20/90	0.93	3	98.9	0.55	0.14	23	8.13	17.9	6.6	0.03	0.47	15.3	1	0.03	0.11	40	48
Soil Borings																		
SB1-10	1/8/91	0.9	8	161	0.55	0.03	32.9	10.5	27.5	8.01	ND	0.2	23.8	ND	0.04	0.18	54	63
SB1-25	1/8/91	1.1	11	297	0.72	0.05	38.7	14.7	37.8	7.54	ND	0.56	27	0.7	0.06	0.21	77	85
SB2-15	1/4/91	0.8	3.6	173	0.43	0.04	24.9	10.9	24.1	6.94	ND	0.22	21.4	0.5	0.03	0.14	42	66.8
SB3-15	1/8/91	0.8	2.6	124	0.39	0.08	28.3	9.45	23.4	6.69	ND	0.1	19	0.5	0.02	0.15	40	59
SB3-25	1/8/91	1.4	14.5	489	0.58	0.1	33.6	15.9	38.6	9.47	ND	1.19	29.5	1.6	0.05	0.15	72	104
SB4a-10	1/3/91	1.21	7.6	157	0.61	0.05	29.8	10.4	21.7	7.07	ND	0.26	21.5	0.8	0.03	0.13	51	54.3
SB4a-15	1/3/91	0.63	2.7	147	0.37	0.09	21.8	8.14	17.6	4.98	ND	0.11	15	0.7	ND	0.11	34.6	49.1
SB5a-10	1/3/91	0.77	6.6	94.3	0.57	0.04	19.9	6.16	19.6	5.97	0.02	0.15	16	0.7	0.03	0.08	37	41.3
SB5a-15	1/3/91	0.7	1.5	180	0.64	0.07	39.2	10.5	27.4	7.03	0.02	0.25	27.9	0.9	0.15	0.2	43	78.2
SB5a-15(QA/QC)	1/3/91	7.1	ND	120	0.08	ND	20	10	37	ND	ND	ND	22	0.8	ND	ND	18	64
SB6a-10	1/3/91	0.64	2.9	70.8	0.23	0.04	11.7	4.7	12.1	3.33	ND	0.28	9.03	ND	ND	0.04	27	29.3
SB7a-10	1/3/91	0.77	6.9	105	0.53	0.02	20.3	7.61	21.1	6.21	ND	0.31	14.9	1.2	0.05	0.1	37	43.8
SB7a-15	1/3/91	0.73	2.2	146	0.45	0.05	19.5	8.64	17.9	5.78	0.03	0.26	17.2	0.6	0.03	0.11	35	54.2
SB8-10	1/8/91	8.4	7.8	990	0.35	2.55	30.9	11	181	530**	0.58	0.54	24	4.2	0.18	0.1	42	3500**
SB8-25	1/8/91	1	11.8	203	0.6	0.14	30.4	12.1	28.6	8.16	ND	0.19	22	0.4	0.05	0.12	59.8	72
SB9-5	1/8/91	0.5	3	101	0.48	0.04	21.3	7.94	15	4.99	ND	0.26	14.9	0.7	0.03	0.11	39	47
SB9-5(QA/QC)	1/8/91	3.3	1.7	79	0.02	0.15	16	6.8	13	ND	ND	0.13	13	ND	ND	ND	21	34
SB9-10	1/8/91	0.8	7.8	155	0.59	ND	33.1	12	27.2	8.71	ND	0.27	21.2	0.6	ND	0.14	56	61
SB9-25	1/8/91	1.4	19.2	289	0.59	0.09	32.6	17.7	35	11.8	ND	0.81	29.8	1.6	ND	0.18	64	85
SB21-15	1/8/91	0.8	4.2	48.3	0.25	ND	11.8	5.6	13.4	2.89	ND	0.15	10.3	ND	ND	0.08	30	35
SB21-25	1/8/91	1.4	27.2	184	0.58	0.07	34.5	14.8	36.3	9.92	ND	0.74	29	0.7	ND	0.15	66	76
SB23-10	7/17/91	0.4	5	104	0.44	ND	20.3	7.23	15.6	6.97	ND	0.85	15	ND	0.02	0.11	38	44.6
SB23-10 DUP	7/17/91	3.2	ND	91	0.18	0.2	17	7.9	15	6.6	ND	ND	ND	ND	ND	ND	28	41
SB23-25	7/17/91	1.5	11	138	0.72	ND	39.5	10.4	27.6	5.69	ND	0.32	21.9	ND	0.06	0.14	57	66.8
SB23-25 DUP	7/17/91	9.4	ND	160	0.22	0.4	26	13	28	ND	ND	ND	0.2	ND	ND	ND	47	60
SB24-15	7/17/91	1	5	128	0.49	ND	29	8.51	21.7	15.6	ND	1.67	18.2	ND	0.05	0.2	42	84.2
SB24-15 DUP	7/17/91	2.3	ND	90	0.14	ND	15	6.3	14	ND	ND	ND	1.5	ND	ND	ND	18	34
SB24-25	7/17/91	0.7	7	160	0.52	ND	32.1	11	26.5	5.61	ND	0.34	20.5	ND	0.05	0.17	48	66.3
SB25-5	7/17/91	0.6	4	86	0.4	ND	19.9	7.56	15.6	4.3	ND	0.35	13.8	ND	0.03	0.12	38	40.3
SB25-15	7/17/91	ND	ND	90.2	0.23	ND	21.3	6.76	16.6	3.58	ND	0.14	15.1	ND	0.04	0.13	30	49.3

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28-Oct-91

TABLE 7

Soil Sample Analytical Results

Waste Extraction Test (WET) for Soluble/Extractable Metals

LF 2193

(results reported in parts per million - ppm)

Sample Location	Date Collected	Sample Depth (Feet)	Lead	Zinc	Copper	Mercury	Chromium (III/IV)
Test Pit Samples							
T7A-1	12/17/90	5	2	NA	NA	NA	NA
TLA-1	12/20/90	3	18*	NA	11	NA	NA
Soil Boring Samples							
SB8-10	01/08/91	11	7*	280*	NA	NA	NA
Boneyard Samples							
RB1-3	07/18/91	3	10.9*	NA	NA	NA	NA
RB1-8	07/18/91	8	12*	474*	1.8	NA	0.3
RB2-3	07/18/91	3	0.54	NA	NA	ND	NA
RB2-8	07/18/91	8	0.58	NA	NA	NA	NA
RB5-3	07/18/91	3	11*	NA	NA	ND	NA
RB5-8	07/18/91	3	151*	NA	NA	ND	0.4
RB9-3	07/17/91	3	0.33	NA	NA	NA	NA
RB9-8	07/17/91	8	44.4*	NA	NA	ND	0.6
RB11-8	07/17/91	8	2.3	NA	4.0	ND	NA

Notes: NA = not analyzed
ND = not detected above laboratory test method detection limits
* = STLC limit exceeded

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Table 8
Initial Soil Sampling Results
Initial Statistical Analyses
Former Boneyard Area
(results reported in parts per million - ppm)

Sample Location	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III/IV)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Three-Foot Sampling Depth																		
RB1-3	7/18/91	16.0	14.0	1440.0 *	0.57	5.88	46.3	9.23	440.0 *	1090.00 **	ND	1.50	21.0	1.4	0.38	0.11	45.2	5490.0 **
RB2-3	7/18/91	2.8	4.0	135.0	0.53	0.94	23.6	7.39	30.5	530.00 **	2.82 *	0.35	15.2	3.0	0.07	0.13	39.0	216.0
RB4-3	7/17/91	0.5	3.0	105.0	0.45	0.1	22.7	7.62	13.6	5.02	ND	0.35	17.2	3.0	0.02	0.12	41.0	44.8
RB5-3	7/18/91	5.3	19.0	610.0	0.41	3.19	30.9	9.36	12.0	450.00 **	3.11	1.45	24.2	2.0	0.20	0.14	43.0	1220.0
RB6-3	7/17/91	0.3	3.0	103.0	0.50	0.1	20.5	7.05	15.1	4.47	ND	0.21	15.6	3.0	0.04	0.10	36.0	45.5
RB7-3	7/18/91	1.6	5.0	199.0	0.59	0.09	24.0	7.79	21.3	15.60	ND	0.56	17.1	3.0	0.08	0.08	44.0	94.0
RB8-3	7/18/91	1.0	5.0	109.0	0.59	0.09	25.9	9.22	17.6	6.90	ND	0.43	17.9	3.0	0.04	0.15	49.0	59.0
RB9-3	7/17/91	5.9	16.0	332.0	0.42	0.66	61.8 *	12.40	160.0	180.00 **	0.90	2.53	42.0	4.0	0.13	0.12	44.0	2300.0
RB10-3	7/18/91	1.2	8.0	121.0	0.41	0.19	23.6	8.68	21.5	27.00	ND	0.56	16.9	2.0	0.02	0.14	44.0	334.0
RB11-3	7/18/91	2.0	4.0	99.2	0.57	0.09	22.9	7.90	17.1	10.30	ND	0.30	15.3	3.0	0.02	0.12	41.0	58.0
Average		3.66	8.10	325.32	0.50	1.13	30.22	8.66	74.87	231.93	0.74	0.82	20.24	2.74	0.10	0.12	42.62	986.13
Standard Deviation		4.74	5.97	423.40	0.08	1.92	13.36	1.55	135.87	360.12	1.45	0.76	8.14	0.74	0.11	0.02	3.58	1743.94
80% Confidence Range		2.09	2.63	186.51	0.03	0.85	5.88	0.68	59.85	158.63	0.53	0.33	3.59	0.32	0.05	0.01	1.58	768.21
90% Upper Limit		5.75	10.73	511.83	0.54	1.98	36.10	9.35	134.72	390.56	1.27	1.16	23.83	3.06	0.15	0.13	44.20	1754.34
Eight-Foot Sampling Depth																		
RB1-8	7/18/91	32.6	9	2700 *	0.54	11.8 *	52.9 **	12.7	627 **	1750 **	ND	1.18	32	10	0.47	0.06	32	10000 ***
RB2e8	7/18/91	2.6	4	824	0.69	1.43	29.9	8.78	142	150	ND	0.41	29.6	3	0.2	0.16	42	956
RB3-8	7/17/91	1	11	190	0.98	0.1	38.7	18.9	35.2	10.4	ND	0.53	28.7	3	0.02	0.15	63	64.4
RB4-8	7/17/91	1	11	147	0.62	0.1	38.8	14.5	33.7	10.1	ND	0.26	23.8	3	0.03	0.18	55	57.8
RB5-8	7/18/91	9	89 *	585	0.51	3.32	89.8 **	11.1	71.5	692 **	34.1 **	1	58.4	3.5	0.17	0.14	42	1720
RB8-8	7/18/91	1.2	8	113	0.64	0.1	33.2	13	28.4	8.2	0.2	0.19	20.2	3	0.02	0.13	56	57
RB9-8	7/17/91	10	12	695	0.52	4.3	57.5 **	11.4	130	1150 **	2.49 **	2.3	33.7	7.4	0.26	0.11	46	1880
RB10-8	7/18/91	0.9	4	109	0.28	0.17	26.1	7.53	36.7	31.5	0.2	0.78	23.3	3	0.02	0.12	39	162
RB11-8	7/18/91	6.1	5	460	0.39	1.55	32.2	7.9	1500 **	344 **	10.1 **	0.8	16.6	3	0.2	0.11	35	1000
RB12-8	7/17/91	0.7	4	97.4	0.45	0.1	24.4	8.11	18.5	5.06	0.2	0.47	16.8	3	0.06	0.09	39	50.5
Average		6.51	15.70	592.04	0.56	2.26	42.35	11.39	262.30	415.13	4.73	0.79	28.31	4.19	0.15	0.11	44.90	1594.77
Standard Deviation		9.82	25.95	788.29	0.19	3.69	19.85	3.58	471.66	603.94	10.79	0.62	12.16	2.46	0.15	0.05	10.03	3037.06
80% Confidence Range		4.33	11.43	347.24	0.08	1.62	8.74	1.58	207.77	266.04	4.75	0.27	5.36	1.08	0.06	0.02	4.42	1337.84
90% Upper Limit		10.84	27.13	939.28	0.65	3.88	51.09 ***	12.97	470.07 ***	681.17 ***	9.48 ***	1.06	33.67	5.27	0.21	0.14	49.32	2932.61 ***
Combined Statistical Analysis																		
Average		5.09	11.90	458.68	0.53	1.72	36.29	10.03	64.33	323.53	2.73	0.81	24.28	3.47	0.12	0.12	43.76	1290.45
Standard Deviation		7.65	18.74	630.86	0.14	2.91	17.60	3.03	99.50	492.99	7.75	0.67	10.89	1.92	0.13	0.04	7.42	2630.48
S bar X		1.71	4.19	141.06	0.03	0.65	3.94	0.68	22.25	110.23	1.73	0.15	2.44	0.43	0.03	0.01	1.66	543.47
80% Confidence Range (b)		2.27	5.56	187.33	0.04	0.86	5.23	0.90	29.55	146.39	2.30	0.20	3.23	0.57	0.04	0.01	2.20	721.73
90% Upper Limit		7.36	17.46	646.01	0.58	2.58	41.51	10.93	93.87	469.92 ***	5.03 ***	1.01	27.51	4.03	0.16	0.13	45.96	2012.18
Title 22 Standards																		
TTLC	- -	500	500	10000	75	100	2500/500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000
10 times STLC	- -	150	50	1000	7.5	10	50	800	250	50	2	3500	200	10	50	70	240	2500

NOTES: The combined statistical analysis is based on the entire population of analytical data included in this table
ND = Not detected above laboratory test method detection limits
(QA/QC) = Quality Assurance/Quality Control Sample (a comparable soil sample)
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration
* = Samples exceeding the 10x STLC
** = Samples exceeding 10x STLC selected to be run for isolated soluble metal based on statistical concentrations
*** = Statistical Group Exceeds STLC limits

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Table 9
Modified Statistical Analyses
Former Boneyard Area
(results reported in parts per million - ppm)

Sample Location	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III/IV)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Three-Foot Sampling Depth																		
RB1-3	7/18/91	1.60	1.40	144.00	0.057	0.588	4.63	0.923	44.00	10.90 *	ND	0.150	2.10	0.14	0.038	0.011	4.52	549.00
RB2-3	7/18/91	0.28	0.40	13.50	0.053	0.094	2.36	0.739	3.05	0.54 *	ND *	0.035	1.52	0.30	0.007	0.013	3.90	21.60
RB4-3	7/17/91	0.05	0.30	10.50	0.045	0.010	2.27	0.762	1.36	0.50	ND	0.035	1.72	0.30	ND	0.012	4.10	4.48
RB5-3	7/18/91	0.53	1.90	61.00	0.041	0.319	3.09	0.936	1.20	11.00 *	ND *	0.145	2.42	0.20	0.020	0.014	4.30	122.00
RB6-3	7/17/91	0.03	0.30	10.30	0.050	0.010	2.05	0.705	1.51	0.45	ND	0.021	1.56	0.30	0.004	0.010	3.60	4.55
RB7-3	7/18/91	0.16	0.50	19.90	0.059	0.009	2.40	0.779	2.13	1.56	ND	0.056	1.71	0.30	0.008	0.008	4.40	9.40
RB8-3	7/18/91	0.10	0.50	10.90	0.059	0.009	2.59	0.922	1.76	0.69	ND	0.043	1.79	0.30	0.004	0.015	4.90	5.90
RB9-3	7/17/91	0.59	1.60	33.20	0.042	0.066	6.18	1.240	16.00	0.33 *	0.090	0.253	4.20	0.40	0.013	0.012	4.40	230.00
RB10-3	7/18/91	0.12	0.80	12.10	0.041	0.019	2.36	0.868	2.15	2.70	ND	0.056	1.69	0.20	ND	0.014	4.40	33.40
RB11-3	7/18/91	0.20	0.40	9.92	0.057	0.009	2.29	0.790	1.71	1.03	ND	0.030	1.53	0.30	ND	0.012	4.10	5.80
Average		0.37	0.81	32.53	0.050	0.113	3.02	0.866	7.49	2.97	0.016	0.082	2.02	0.27	0.010	0.012	4.26	98.61
Standard Deviation		0.47	0.60	42.34	0.008	0.192	1.34	0.155	13.59	4.27	0.026	0.076	0.81	0.07	0.011	0.002	0.36	174.39
80% Confidence Range (b)		0.21	0.26	18.65	0.003	0.085	0.59	0.068	5.99	1.88	0.011	0.033	0.36	0.03	0.005	0.001	0.16	76.82
90% Upper Limit		0.57	1.07	51.18	0.054	0.198	3.61	0.935	13.47	4.85	0.028	0.116	2.38	0.31	0.015	0.013	4.42	175.43
Eight-Foot Sampling Depth																		
RB1-8	7/18/91	3.26	0.90	270.00	0.054	1.180	0.30 *	1.270	1.80 *	12.00 *	ND	0.118	3.20	1.00	0.047	0.006	3.20	474.00 *
RB2-8	7/18/91	0.26	0.40	82.40	0.069	0.143	2.99	0.878	14.20	0.58 *	0.020	0.041	2.96	0.30	0.020	0.016	4.20	95.60
RB3-8	7/17/91	0.10	1.10	19.00	0.098	0.010	3.87	1.890	3.52	1.04	ND	0.053	2.87	0.30	ND	0.015	6.30	6.44
RB4-8	7/17/91	0.10	1.10	14.70	0.062	0.010	3.88	1.450	3.37	1.01	ND	0.026	2.38	0.30	0.003	0.018	5.50	5.78
RB5-8	7/18/91	0.90	8.90	58.50	0.051	0.332	0.40 *	1.110	7.15	151.00 *	ND *	0.100	5.84	0.35	0.017	0.014	4.20	172.00
RB8-8	7/18/91	0.12	0.80	11.30	0.064	0.010	3.32	1.300	2.84	0.82	ND	0.019	2.02	0.30	ND	0.013	5.60	5.70
RB9-8	7/17/91	1.00	1.20	69.50	0.052	0.430	0.60 *	1.140	13.00	44.40 *	ND *	0.230	3.37	0.74	0.026	0.011	4.60	188.00
RB10-8	7/18/91	0.09	0.40	10.90	0.028	0.017	2.61	0.753	3.67	3.15	ND	0.078	2.33	0.30	ND	0.012	3.90	16.20
RB11-8	7/18/91	0.61	0.50	46.00	0.039	0.155	3.22	0.790	4.00 *	40.00 *	ND *	0.080	1.66	0.30	0.020	0.011	3.50	100.00
RB12-8	7/17/91	0.07	0.40	9.74	0.045	0.010	2.44	0.811	1.85	0.51	ND	0.047	1.68	0.30	0.006	0.009	3.90	5.05
Average		0.65	1.57	59.20	0.056	0.230	2.36	1.139	5.54	25.45	0.009	0.079	2.83	0.42	0.015	0.013	4.49	106.88
Standard Deviation		0.98	2.59	78.83	0.019	0.366	1.41	0.358	4.51	47.20	0.004	0.062	1.22	0.25	0.015	0.004	1.00	147.16
80% Confidence Range (b)		0.43	1.14	34.72	0.008	0.161	0.62	0.158	1.99	20.79	0.002	0.027	0.54	0.11	0.006	0.002	0.44	64.83
90% Upper Limit		1.08	2.71	93.93	0.065	0.391	2.98	1.297	7.53	46.24 ***	0.011	0.106	3.37	0.53	0.021	0.014	4.93	171.70
Combined Statistical Analysis																		
Average		0.51	1.19	45.87	0.053	0.172	2.69	1.003	6.51	14.21	0.013	0.08	2.43	0.35	0.012	0.012	4.38	102.75
Standard Deviation		0.76	1.87	63.09	0.014	0.291	1.38	0.303	9.90	34.60	0.018	0.07	1.09	0.19	0.013	0.003	0.74	157.11
80% Confidence Range (b)		0.23	0.56	18.73	0.004	0.086	0.41	0.090	2.94	10.27	0.005	0.02	0.32	0.06	0.004	0.001	0.22	46.65
90% Upper Limit		0.74	1.75	64.60	0.058	0.258	3.10	1.093	9.45	24.48	0.018	0.10	2.75	0.40	0.016	0.013	4.60	149.40
Title 22 Standards																		
STLC Limits**		15	5.0	100	0.75	1.0	5.0	80	25	5.0	0.20	350	20	1.0	5.0	7.0	24	250

NOTES: The values for total metal concentrations in this table have been divided by 10 in order to allow comparison directly with the WET analytical data and the STLC Limits.
This methodology is detailed in Appendix F of the report. The concentration units of the WET data values and the original total metal values are in parts per million.
The combined statistical analysis is based on the entire population of analytical data included inthis table.

ND = Not detected above laboratory test method detection limits
(QA/QC) = Quality Assurance/Quality Control Sample (a comparable soil sample)
DUP = Duplicate
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration
* = Results from WET analysis
** = As specified in Title 22 CCR
*** = Statistical Group Exceeds STLC limits

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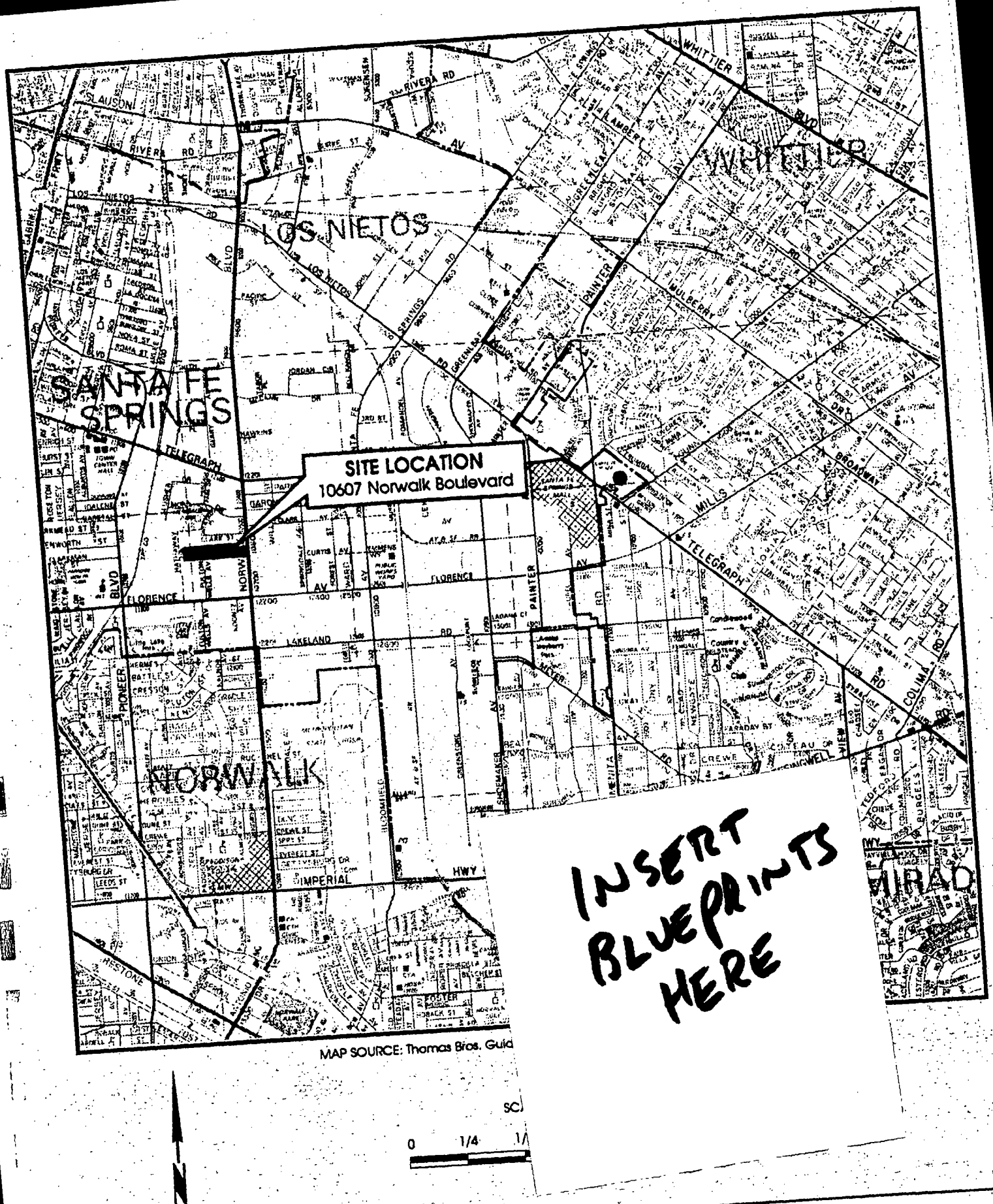

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Figure 1 : SITE VICINITY

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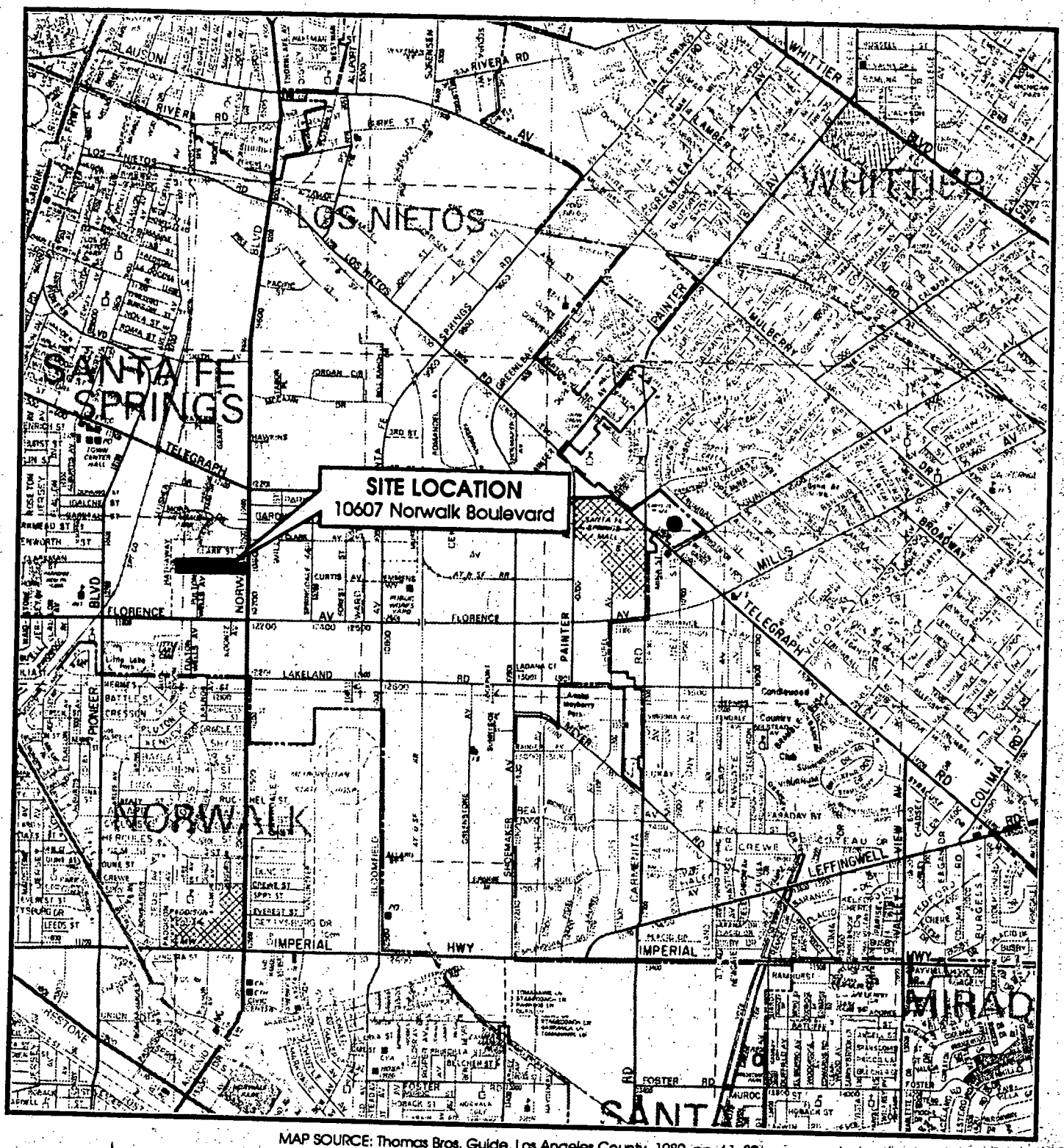
Project No. 2193

2193-04

092790DTS/ldr



MAP SOURCE: Thomas Bros. Guide, Los Angeles County, 1989, pp. 61, 82.

Figure 1 : SITE VICINITY

Project No. 2193

092790DTS/ldr

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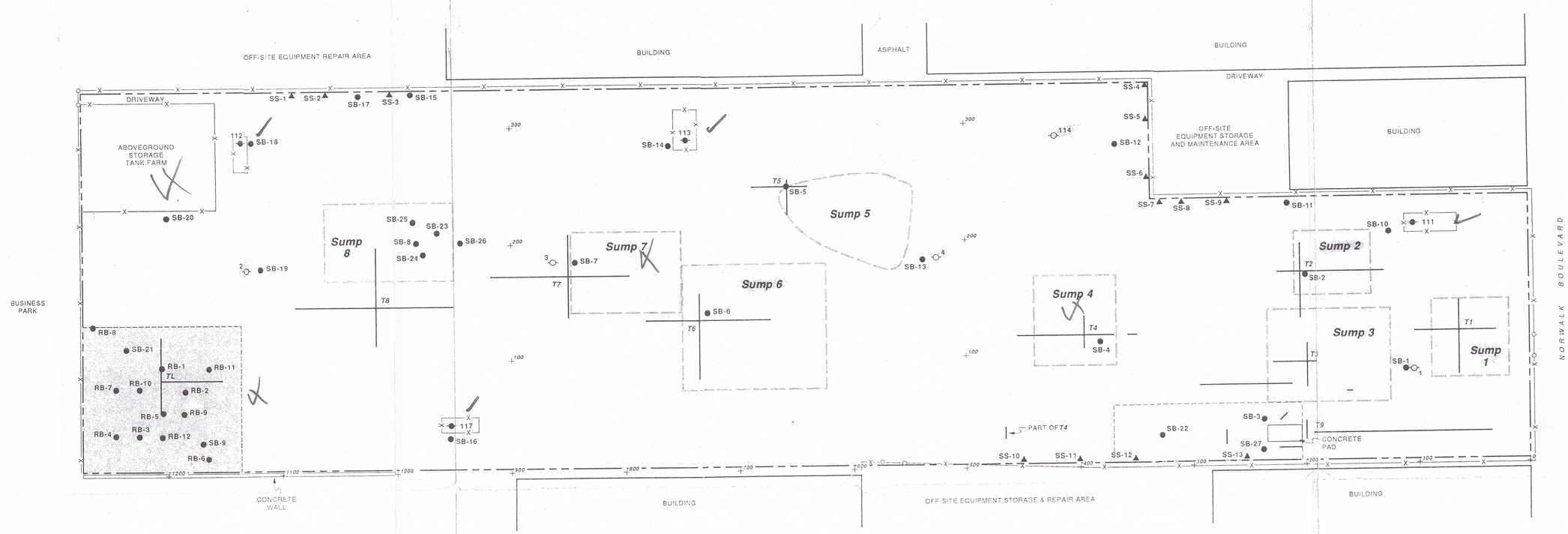
2193-04

138543



EXPLANATION

T8	Approximate Location of Exploratory Test Pit
SS-12 ▲	Soil Sample
RB/SB-22 ●	Soil Boring
117	Operational Oil Well
114	Abandoned Oil Well
	Approximate Location of Potential Abandoned Sump (Based on Woodward Clyde Consultants Data and Historic Aerial Photographs)
	Approximate Location of Suspect Boneyard Area (Based on Historic Aerial Photographs)
	Approximate Location of Former Above-Ground Storage Tank Farm and Piping (Based on Historic Aerial Photographs)
1,200 +	Surveyed Measured Intervals (100 foot)
—x—	Chain Link Fence
—o—	Gate
— — —	Property Boundary

SCALE
50 25 0 50 FEET
1 INCH = 50 FEET

SOURCE: Woodward Clyde Consultants, September 14,1988; Kendricks & Associates, Inc., June 29, 1988

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Irvine, California

Mobil Exploration & Producing U.S., Inc.
Jalk Fee
Santa Fe Springs, California

Figure 2 :
SITE PLAN

Project No. 2193
Date SEPT 1991
Sheet 2 of 7

2193-34

138543

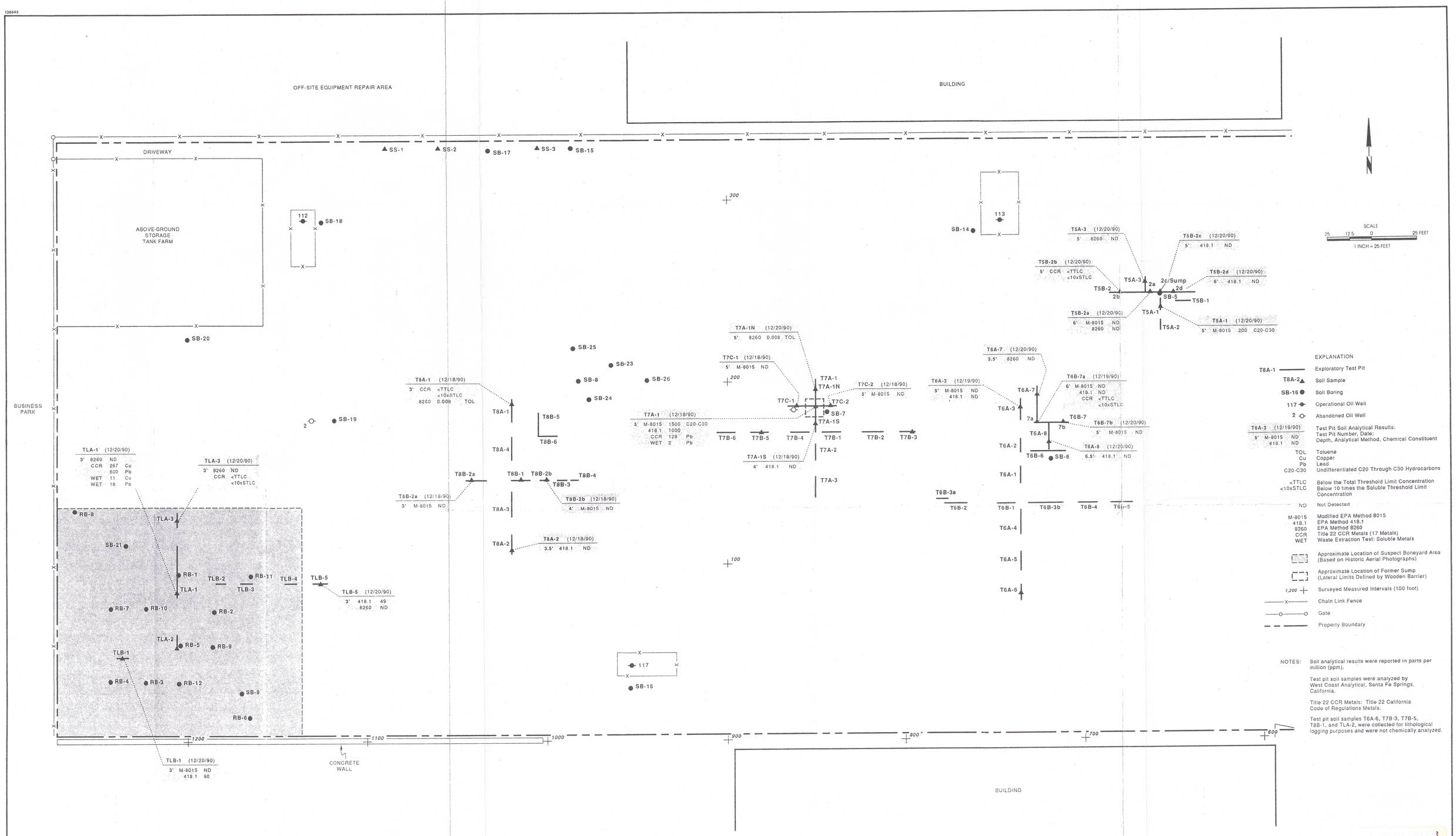

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Figure 3 :
SITE PLAN SHOWING TEST PIT SOIL ANALYTICAL RESULTS, WEST END

Project No. 2193
Date SEPT 1991
Sheet 3 of 7

2193-27

138543

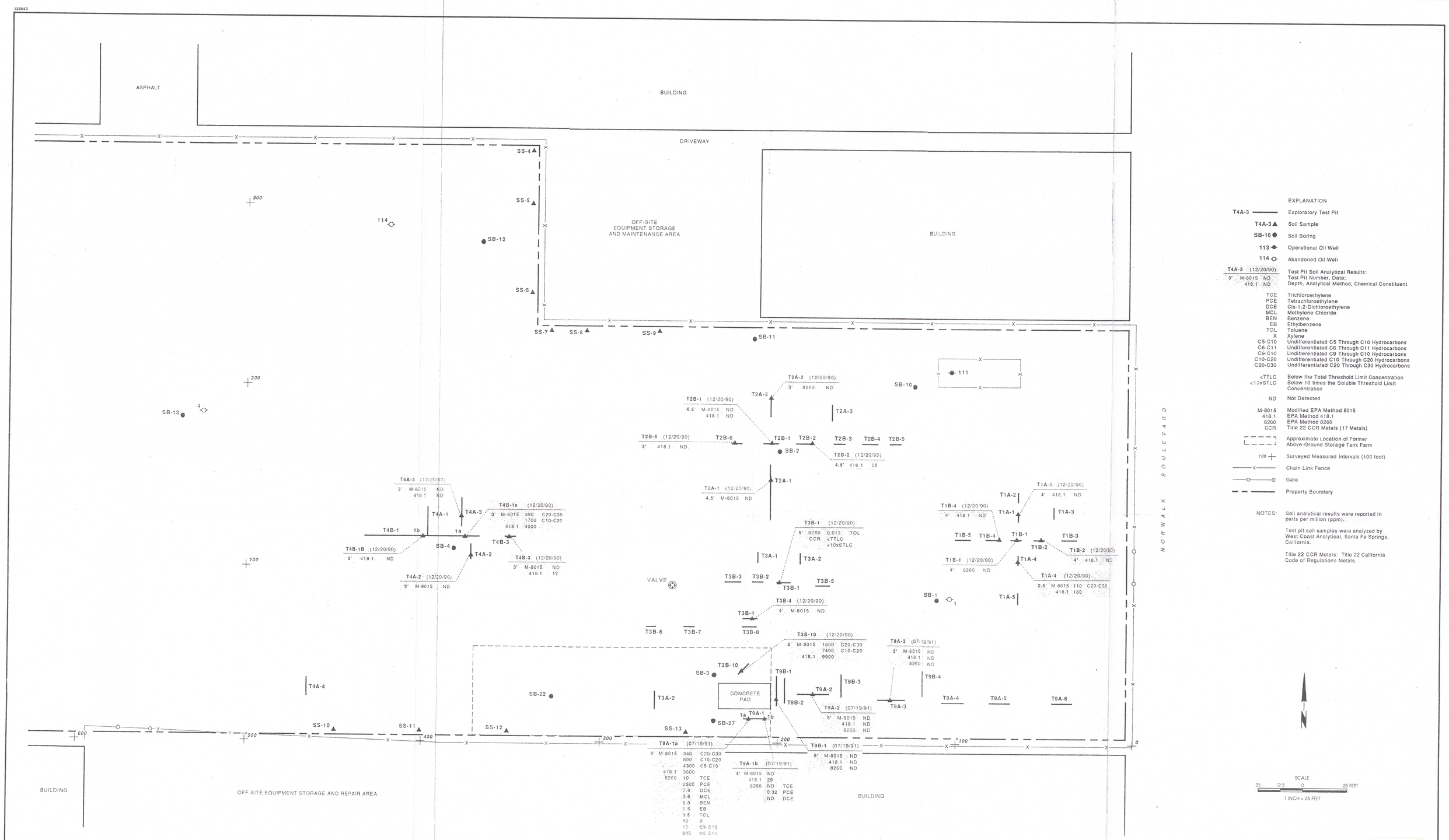

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Figure 4 :
SITE PLAN SHOWING TEST PIT SOIL ANALYTICAL RESULTS, EAST END

Project No. 2193
Date SEPT 1991
Sheet 4 of 7

138543

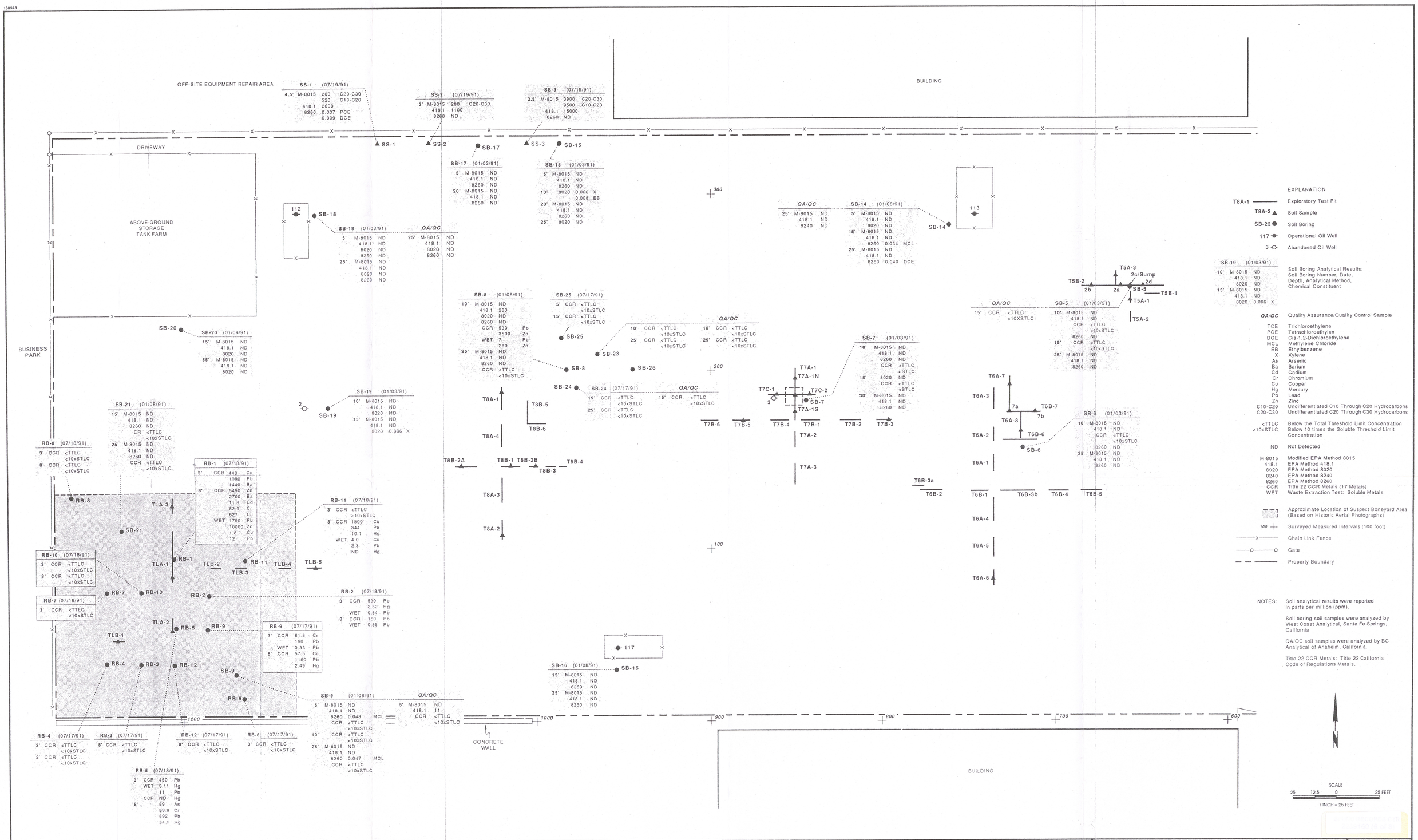

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Figure 5 :
SITE PLAN SHOWING SOIL BORING SOIL ANALYTICAL RESULTS, WEST END

Project No. 2193
Date SEPT 1991
Sheet 5 of 7

2193-29

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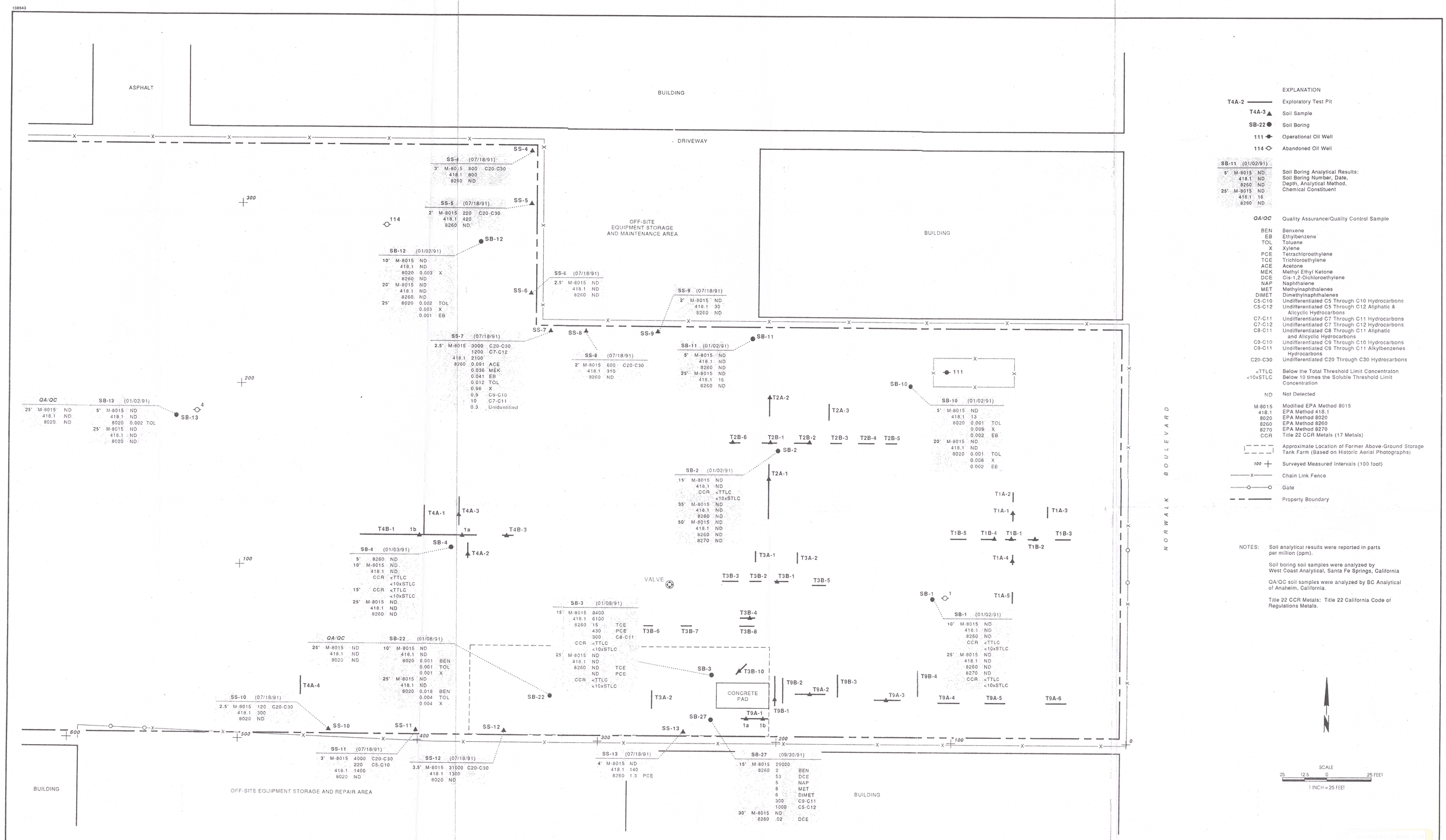

EXPLANATION

T4A-2 ———	Exploratory Test Pit
T4A-3 ▲	Soil Sample
SB-22 ●	Soil Boring
111 ●—	Operational Oil Well
114 —○	Abandoned Oil Well
SB-11 (01/02/91) 5' M-8015 ND 418.1 ND 8260 ND 25' M-8015 ND 418.1 16 8260 ND	Soil Boring Analytical Results: Soil Boring Number, Date, Depth, Analytical Method, Chemical Constituent
QA/QC	Quality Assurance/Quality Control Sample
BEN	Benzene
EB	Ethylbenzene
TOL	Toluene
X	Xylene
PCE	Tetrachloroethylene
TCE	Trichloroethylene
ACE	Acetone
MEK	Methyl Ethyl Ketone
DCE	Cis-1,2-Dichloroethylene
NAP	Naphthalene
MET	Methylnaphthalenes
DIMET	Dimethylnaphthalenes
C5-C10	Undifferentiated C5 Through C10 Hydrocarbons
C5-C12	Undifferentiated C5 Through C12 Aliphatic & Alicyclic Hydrocarbons
C7-C11	Undifferentiated C7 Through C11 Hydrocarbons
C7-C12	Undifferentiated C7 Through C12 Hydrocarbons
C8-C11	Undifferentiated C8 Through C11 Aliphatic and Alicyclic Hydrocarbons
C9-C10	Undifferentiated C9 Through C10 Hydrocarbons
C9-C11	Undifferentiated C9 Through C11 Alkylbenzenes Hydrocarbons
C20-C30	Undifferentiated C20 Through C30 Hydrocarbons
<TTLC <10xSTLC	Below the Total Threshold Limit Concentraton Below 10 times the Soluble Threshold Limit Concentration
ND	Not Detected
M-8015	Modified EPA Method 8015
418.1	EPA Method 418.1
8020	EPA Method 8020
8260	EPA Method 8260
8270	EPA Method 8270
CCR	Title 22 CCR Metals (17 Metals)
┌ ┐ └ ┘	Approximate Location of Former Above-Ground Storage Tank Farm (Based on Historic Aerial Photographs)
100 +	Surveyed Measured Intervals (100 foot)
—x—	Chain Link Fence
—o—o—	Gate
— — —	Property Boundary

NOTES: Soil analytical results were reported in parts per million (ppm).

Soil boring soil samples were analyzed by West Coast Analytical, Santa Fe Springs, California

QA/QC soil samples were analyzed by BC Analytical of Anaheim, California.

Title 22 CCR Metals: Title 22 California Code of Regulations Metals.

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Irvine, California

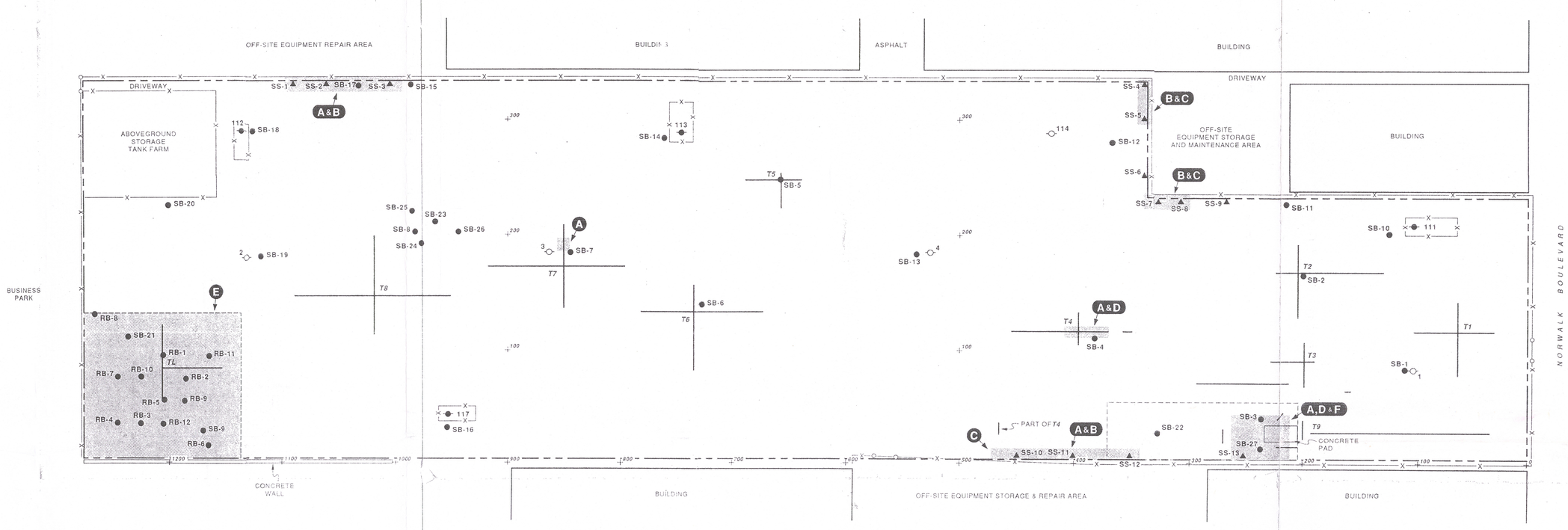
Mobil Exploration & Producing U.S., Inc.
Jalk Fee
Santa Fe Springs, California

Figure 6 :
SITE PLAN SHOWING SOIL BORING SOIL ANALYTICAL RESULTS, EAST END

Project No. 2193
Date SEPT 1991
Sheet 6 of 7

2193-30

138543



EXPLANATION

T8 ———	Approximate Location of Exploratory Test Pit
SS-12 ▲	Soil Sample
SB-22 ●	Soil Boring
117	Operational Oil Well
114 ○	Abandoned Oil Well
	Approximate Location of Suspect Boneyard Area (Based on Historic Aerial Photographs)
	Approximate Location of Former Above-Ground Storage Tank Farm (Based on Historic Aerial Photographs)
1,200 +	Surveyed Measured Intervals (100 foot)
——x——	Chain Link Fence
——o——o	Gate
— — —	Property Boundary

- (A) Approximate Areas of Crude Oil-Affected Soils Above Typical Action Levels (1,000 ppm TPH) Requiring Remediation
- (B) Approximate Areas of TPH-Affected Soils Apparently Due to Off-Site Sources
- (C) Approximate Areas of TPH-Affected Soils Below Typical Action Levels (1,000 ppm TPH) Requiring Remediation
- (D) Approximate Area of Fuel-Affected Soils
- (E) Approximate Area of Metals (Pb, Zn & Cu) in Soils Exceeding STLC Limits
- (F) Approximate Area of PCE & TCE-Affected Soils

NOTES: All area approximations are based on analytical results. Area estimations concerning active oil wells, existing tank farm, and "B" areas are also based on visual observations.

N

SCALE
50 25 0 50 FEET
1 INCH = 50 FEET

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Jalk Fee
Santa Fe Springs, California

Figure 7 :
SITE PLAN SHOWING APPROXIMATE EXTENT OF AFFECTED AREAS

Project No. 2193
Date SEPT 1991
Sheet 7 of 7

2193-35

Client: Levine-Fricke Sample: SB1-25
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
121

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.1	0.2	150	500
Arsenic	11	1	50	500
Barium	297	0.2	1000	10000
Beryllium	0.72	0.02	7.5	75
Cadmium	0.05	0.02	10	100
Chromium (III/VI)	38.7	0.7	5600/50	2500/500
Cobalt	14.7	0.02	800	8000
Copper	37.8	0.09	250	2500
Lead	7.54	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.56	0.05	3500	3500
Nickel	27	3	200	2000
Selenium	0.7	0.3	10	100
Silver	0.06	0.02	50	500
Thallium	0.21	0.02	70	700
Vanadium	77	1	240	2400
Zinc	85	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB3-15
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
131

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.8	0.2	150	500
Arsenic	2.6	0.7	50	500
Barium	124	0.2	1000	10000
Beryllium	0.39	0.02	7.5	75
Cadmium	0.08	0.02	10	100
Chromium (III/VI)	28.3	0.7	5600/50	2500/500
Cobalt	9.45	0.02	800	8000
Copper	23.4	0.09	250	2500
Lead	6.69	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.1	0.05	3500	3500
Nickel	19	1	200	2000
Selenium	0.5	0.3	10	100
Silver	0.02	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	40	1	240	2400
Zinc	59	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB3-25
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559 141

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.4	0.2	150	500
Arsenic	14.5	0.6	50	500
Barium	489	0.2	1000	10000
Beryllium	0.58	0.02	7.5	75
Cadmium	0.1	0.02	10	100
Chromium (III/VI)	33.6	0.7	5600/50	2500/500
Cobalt	15.9	0.02	800	8000
Copper	38.6	0.09	250	2500
Lead	9.47	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	1.19	0.05	3500	3500
Nickel	29.5	0.3	200	2000
Selenium	1.6	0.3	10	100
Silver	0.05	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	72	2	240	2400
Zinc	104	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB8-10
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
151

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	8.4	0.2	150	500
Arsenic	7.8	0.8	50	500
Barium	990	0.2	1000	10000
Beryllium	0.35	0.02	7.5	75
Cadmium	2.55	0.02	10	100
Chromium (III/VI)	30.9	0.7	5600/50	2500/500
Cobalt	11	0.02	800	8000
Copper	181	0.09	250	2500
Lead	530 *	0.04	50	1000
Mercury	0.58	0.08	2	20
Molybdenum	0.54	0.05	3500	3500
Nickel	24	2	200	2000
Selenium	4.2	0.3	10	100
Silver	0.18	0.02	50	500
Thallium	0.1	0.02	70	700
Vanadium	42	1	240	2400
Zinc	3500 *	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB8-25
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
161

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1	0.2	150	500
Arsenic	11.8	0.7	50	500
Barium	203	0.2	1000	10000
Beryllium	0.6	0.02	7.5	75
Cadmium	0.14	0.02	10	100
Chromium (III/VI)	30.4	0.7	5600/50	2500/500
Cobalt	12.1	0.02	800	8000
Copper	28.6	0.09	250	2500
Lead	8.16	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.19	0.05	3500	3500
Nickel	22	1	200	2000
Selenium	0.4	0.3	10	100
Silver	0.05	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	59.8	0.8	240	2400
Zinc	72	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB9-5
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
171

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.5	0.2	150	500
Arsenic	3	0.8	50	500
Barium	101	0.2	1000	10000
Beryllium	0.48	0.02	7.5	75
Cadmium	0.04	0.02	10	100
Chromium (III/VI)	21.3	0.7	5600/50	2500/500
Cobalt	7.94	0.02	800	8000
Copper	15	0.09	250	2500
Lead	4.99	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.26	0.05	3500	3500
Nickel	14.9	0.1	200	2000
Selenium	0.7	0.3	10	100
Silver	0.03	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	39	4	240	2400
Zinc	47	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB9-10
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
181

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.8	0.2	150	500
Arsenic	7.8	0.9	50	500
Barium	155	0.2	1000	10000
Beryllium	0.59	0.02	7.5	75
Cadmium	ND<0.02	0.02	10	100
Chromium (III/VI)	33.1	0.7	5600/50	2500/500
Cobalt	12	0.02	800	8000
Copper	27.2	0.09	250	2500
Lead	8.71	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.27	0.05	3500	3500
Nickel	21.2	0.2	200	2000
Selenium	0.6	0.3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	56	3	240	2400
Zinc	61	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB9-25
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
191

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.4	0.2	150	500
Arsenic	19.2	0.7	50	500
Barium	289	0.2	1000	10000
Beryllium	0.59	0.02	7.5	75
Cadmium	0.09	0.02	10	100
Chromium (III/VI)	32.6	0.7	5600/50	2500/500
Cobalt	17.7	0.02	800	8000
Copper	35	0.09	250	2500
Lead	11.8	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.81	0.05	3500	3500
Nickel	29.8	0.5	200	2000
Selenium	1.6	0.3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.18	0.02	70	700
Vanadium	64	3	240	2400
Zinc	85	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB21-15
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
221

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.8	0.2	150	500
Arsenic	4.2	0.5	50	500
Barium	48.3	0.2	1000	10000
Beryllium	0.25	0.02	7.5	75
Cadmium	ND<0.02	0.02	10	100
Chromium (III/VI)	11.8	0.7	5600/50	2500/500
Cobalt	5.6	0.02	800	8000
Copper	13.4	0.09	250	2500
Lead	2.89	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.15	0.05	3500	3500
Nickel	10.3	0.1	200	2000
Selenium	ND<0.3	0.3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.08	0.02	70	700
Vanadium	30	3	240	2400
Zinc	35	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB21-25
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
231

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.4	0.2	150	500
Arsenic	27.2	0.7	50	500
Barium	184	0.2	1000	10000
Beryllium	0.58	0.02	7.5	75
Cadmium	0.07	0.02	10	100
Chromium (III/VI)	34.5	0.7	5600/50	2500/500
Cobalt	14.8	0.02	800	8000
Copper	36.3	0.09	250	2500
Lead	9.92	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.74	0.05	3500	3500
Nickel	29	1	200	2000
Selenium	0.7	0.3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	66	2	240	2400
Zinc	76	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: Method Blank
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	2	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 78

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB14-5
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 80

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB20-15
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 91

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB20-55
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 87

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB22-10
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	1	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	2	1
Total Xylenes	1	1
Surrogate Percent Recovery:	73	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17559
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB22-25
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	18	1
Chlorobenzene	ND	3
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	4	1
Total Xylenes	4	1
Surrogate Percent Recovery:	102	

ND-Not Detected. The limit of detection is reported above.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB1-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/16/91

RUN NUMBER: 17559B2
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	30.
208-96-8	ACENAPHTHYLENE	ND	30.
120-12-7	ANTHRACENE	ND	30.
56-55-3	BENZO(A)ANTHRACENE	ND	30.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	30.
191-24-2	BENZO(GHI)PERYLENE	ND	30.
50-32-8	BENZO(A)PYRENE	ND	30.
65-85-0	BENZOIC ACID	ND	200.
100-51-6	BENZYL ALCOHOL	ND	30.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	30.
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND	30.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	30.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	200.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	30.
85-68-7	BUTYL BENZYL PHTHALATE	ND	30.
106-47-8	4-CHLOROANILINE	ND	30.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	30.
91-58-7	2-CHLORONAPHTHALENE	ND	30.
95-57-8	2-CHLOROPHENOL	ND	30.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	30.
218-01-9	CHRYSENE	ND	30.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	30.
132-64-9	DIBENZOFURAN	ND	30.
84-74-2	DI-N-BUTYL PHTHALATE	ND	30.
95-50-1	1,2-DICHLOROBENZENE	ND	30.
541-73-1	1,3-DICHLOROBENZENE	ND	30.
106-46-7	1,4-DICHLOROBENZENE	ND	30.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	70.
120-33-2	2,4-DICHLOROPHENOL	ND	30.
84-66-2	DIETHYL PHTHALATE	ND	30.
105-67-9	2,4-DIMETHYLPHENOL	ND	30.
131-11-3	DIMETHYL PHTHALATE	ND	30.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	200.
51-28-5	2,4-DINITROPHENOL	ND	200.
121-14-2	2,4-DINITROTOLUENE	ND	30.
606-20-2	2,6-DINITROTOLUENE	ND	30.
117-84-0	DI-N-OCTYL PHTHALATE	ND	30.
206-44-0	FLUORANTHENE	ND	30.
86-73-7	FLUORENE	ND	30.
118-74-1	HEXACHLOROBENZENE	ND	30.
87-68-3	HEXACHLOROBUTADIENE	ND	30.
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	30.
67-72-1	HEXACHLOROETHANE	ND	30.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	30.
78-59-1	ISOPHORONE	ND	30.
91-57-6	2-METHYLNAPHTHALENE	ND	30.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB1-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/16/91

RUN NUMBER: 17559B2
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
95-48-7	2-METHYLPHENOL	ND	30.
106-44-5	4-METHYLPHENOL	ND	30.
91-20-3	NAPHTHALENE	ND	30.
88-74-4	2-NITROANILINE	ND	200.
99-09-2	3-NITROANILINE	ND	200.
100-01-6	4-NITROANILINE	ND	200.
98-95-3	NITROBENZENE	ND	30.
88-75-5	2-NITROPHENOL	ND	30.
100-02-7	4-NITROPHENOL	ND	200.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	30.
621-64-7	N-NITROSODIPROPYLAMINE	ND	30.
87-86-5	PENTACHLOROPHENOL	ND	200.
85-01-8	PHENANTHRENE	ND	30.
108-95-2	PHENOL	ND	30.
129-00-0	PYRENE	ND	30.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	30.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	200.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	30.

** - Cannot be separated from diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB1-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	BNA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: BLANK

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/14/91

RUN NUMBER: 17559B1
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	30.
208-96-8	ACENAPHTHYLENE	ND	30.
120-12-7	ANTHRACENE	ND	30.
56-55-3	BENZO(A)ANTHRACENE	ND	30.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	30.
191-24-2	BENZO(GHI)PERYLENE	ND	30.
50-32-8	BENZO(A)PYRENE	ND	30.
65-85-0	BENZOIC ACID	ND	200.
100-51-6	BENZYL ALCOHOL	ND	30.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	30.
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND	30.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	30.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	200.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	30.
85-68-7	BUTYL BENZYL PHTHALATE	ND	30.
106-47-8	4-CHLOROANILINE	ND	30.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	30.
91-58-7	2-CHLORONAPHTHALENE	ND	30.
95-57-8	2-CHLOROPHENOL	ND	30.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	30.
218-01-9	CHRYSENE	ND	30.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	30.
132-64-9	DIBENZOFURAN	ND	30.
84-74-2	DI-N-BUTYL PHTHALATE	ND	30.
95-50-1	1,2-DICHLOROBENZENE	ND	30.
541-73-1	1,3-DICHLOROBENZENE	ND	30.
106-46-7	1,4-DICHLOROBENZENE	ND	30.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	70.
120-33-2	2,4-DICHLOROPHENOL	ND	30.
84-66-2	DIETHYL PHTHALATE	ND	30.
105-67-9	2,4-DIMETHYLPHENOL	ND	30.
131-11-3	DIMETHYL PHTHALATE	ND	30.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	200.
51-28-5	2,4-DINITROPHENOL	ND	200.
121-14-2	2,4-DINITROTOLUENE	ND	30.
606-20-2	2,6-DINITROTOLUENE	ND	30.
117-84-0	DI-N-OCTYL PHTHALATE	ND	30.
206-44-0	FLUORANTHENE	ND	30.
86-73-7	FLUORENE	ND	30.
118-74-1	HEXACHLOROBENZENE	ND	30.
87-68-3	HEXACHLOROBUTADIENE	ND	30.
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	30.
67-72-1	HEXACHLOROETHANE	ND	30.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	30.
78-59-1	ISOPHORONE	ND	30.
91-57-6	2-METHYLNAPHTHALENE	ND	30.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: BLANK

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/14/91

RUN NUMBER: 17559B1
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
95-48-7	2-METHYLPHENOL	ND	30.
106-44-5	4-METHYLPHENOL	ND	30.
91-20-3	NAPHTHALENE	ND	30.
88-74-4	2-NITROANILINE	ND	200.
99-09-2	3-NITROANILINE	ND	200.
100-01-6	4-NITROANILINE	ND	200.
98-95-3	NITROBENZENE	ND	30.
88-75-5	2-NITROPHENOL	ND	30.
100-02-7	4-NITROPHENOL	ND	200.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	30.
621-64-7	N-NITROSODIPROPYLAMINE	ND	30.
87-86-5	PENTACHLOROPHENOL	ND	200.
85-01-8	PHENANTHRENE	ND	30.
108-95-2	PHENOL	ND	30.
129-00-0	PYRENE	ND	30.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	30.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	200.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	30.

** - Cannot be separated from diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: BLANK
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	BNA	

SEMI-VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATE ANALYZED: 01/15/91,01/16/91
INSTRUMENT: 4500

MATRIX: SOIL

SAMPLE #	NITRO-BENZENE-D5	2-FLUORO-BIPHENYL	TERPHENYL-D14	PHENOL-D5	2-FLUORO-PHENOL	TRIBROMO-PHENOL
BLANK	82	85	101	79	82	84
SB1-25	73	76	84	72	74	80

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB1-10

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V15
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB1-10
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB1-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB1-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB3-15

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V14
SAMPLE AMOUNT: 10G:10ML,2UL
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	10000.
71-43-2	BENZENE	ND	3000.
75-27-4	BROMODICHLOROMETHANE	ND	3000.
75-25-2	BROMOFORM	ND	3000.
74-83-9	BROMOMETHANE	ND	10000.
78-93-3	2-BUTANONE (MEK)	ND	10000.
75-15-0	CARBON DISULFIDE	ND	3000.
56-23-5	CARBON TETRACHLORIDE	ND	3000.
108-90-7	CHLOROBENZENE	ND	3000.
75-00-3	CHLOROETHANE	ND	10000.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	30000.
67-66-3	CHLOROFORM	ND	3000.
74-87-3	CHLOROMETHANE	ND	10000.
108-41-8	CHLOROTOLUENE	ND	3000.
124-48-1	DIBROMOCHLOROMETHANE	ND	3000.
95-50-1	1,2-DICHLOROBENZENE	ND	3000.
541-73-1	1,3-DICHLOROBENZENE	ND	3000.
106-46-7	1,4-DICHLOROBENZENE	ND	3000.
75-34-3	1,1-DICHLOROETHANE	ND	3000.
107-06-2	1,2-DICHLOROETHANE	ND	3000.
75-35-4	1,1-DICHLOROETHYLENE	ND	3000.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	3000.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	3000.
78-87-5	1,2-DICHLOROPROPANE	ND	3000.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	3000.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	3000.
100-41-4	ETHYLBENZENE	ND	3000.
106-93-4	ETHYLENE DIBROMIDE	ND	3000.
76-13-1	FREON-TF	ND	3000.
119-78-6	2-HEXANONE	ND	10000.
75-09-2	METHYLENE CHLORIDE	ND	10000.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	10000.
100-42-5	STYRENE	ND	3000.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	3000.
127-18-4	TETRACHLOROETHYLENE	430000.	3000.
109-99-9	TETRAHYDROFURAN	ND	10000.
108-88-3	TOLUENE	ND	3000.
71-55-6	1,1,1-TRICHLOROETHANE	ND	3000.
79-00-5	1,1,2-TRICHLOROETHANE	ND	3000.
79-01-6	TRICHLOROETHYLENE	15000.	3000.
75-69-4	TRICHLOROFLUOROMETHANE	ND	3000.
108-05-4	VINYL ACETATE	ND	10000.
75-01-4	VINYL CHLORIDE	ND	10000.
95-47-6	TOTAL XYLENES	ND	3000.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB3-15
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	C8-C11 ALIPHATIC AND ALICYCLIC HYDROCARBONS	VOA	300000.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB3-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V3
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB16-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB16-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V11
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB21-15

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V16
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB21-15
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB21-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V17
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB21-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: LAB BLANK

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: VBLK746
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: LAB BLANK

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/11/91

RUN NUMBER: VBLK747
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: LAB BLANK

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/11/91
DATE ANALYZED: 01/11/91

RUN NUMBER: VBLK748
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATES ANALYZED: 01/10/91 TO 01/11/91
INSTRUMENT: 5101

MATRIX: SOIL

SAMPLE #	TOLUENE-D8	BFB	1,2-DICHLORO-ETHANE-D4
SB1-10	98	100	102
SB1-25	100	98	106
SB3-15	94	98	104
SB3-25	99	97	104
SB8-10	98	94	112
SB8-25	100	98	107
SB9-5	100	99	110
SB9-25	99	99	106
SB14-15	98	98	107
SB14-25	99	98	108
SB16-15	96	99	106
SB16-25	100	98	104
SB21-15	97	102	105
SB21-25	98	101	106
LAB BLANK	100	100	108
LAB BLANK	100	98	104
LAB BLANK	100	100	102

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB3-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB8-10

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V4
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB8-10
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB8-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V5
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB8-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB9-5

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V6
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	48.	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB9-5
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB9-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V7
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	47.	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB9-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB14-15

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V8
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	34.	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB14-15
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB14-25

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17559V9
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	40.	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB14-25
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17559

SAMPLE: SB16-15

DATE RECEIVED: 01/08/91
DATE EXTRACTED: 01/10/91
DATE ANALYZED: 01/11/91

RUN NUMBER: 17559V10
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB16-15
WCAS JOB #: 17559

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 1/8/91	Serial No.: № 4743
Project Name: Snak Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: SDA

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB16-5	1/8/91	1410		1	Soil							X		
SB16-10		1412										X		
SB16-15		1417										X		
SB16-20		1422										X		
SB16-25		1427										X		
SB22-5		1455										X		
SB22-10		1502										X		
SB22-15		1510										X		
SB22-20		1515										X		
SB22-25		1518										X		
SB3-5		1545										X		
SB3-10		1550										X		
SB3-15		1555										X		
SB3-20		1600										X		
SB3-25		1605										X		
SB3-30		1610										X		

RELINQUISHED BY: (Signature) [signature]	DATE 1/8/91	TIME 1800	RECEIVED BY: (Signature) [signature]	DATE 1/8/91	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) № 17559	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: FED EX BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
[illegible] AVENUE EST #130
EMERYVILLE, CA 94608
714-[illegible]-1320

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory:
WEST COAST ANALYTICAL SERVICES

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: [illegible]	Field Logbook No.: —	Date: 1/8/91	Serial No.: № 4777
Project Name: [illegible]	Project Location: [illegible]		
Sampler (Signature): [illegible]			Samplers: [illegible]

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB9-5	1/8/91	1120		1	[illegible]							X		
SB9-10		1124										X		
SB9-15		1129										X		
SB9-20		1137										X		
SB9-25		1143										X		
SB8-5		1230										X		
SB8-10		1235										X		
SB8-15		1240										X		
SB8-20		1245										X		
SB8-25		1247										X		
SB14-5	[illegible]	1315										X		
SB14-10		1320										X		
SB14-15		1323										X		
SB14-20		1325										X		
SB14-25		1330										X		
												X		

RELINQUISHED BY: (Signature) [illegible]	DATE 1/8/91	TIME 1800	RECEIVED BY: (Signature) [illegible]	DATE 1-8-91	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17559	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: FACKED ON BOVERE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
1920 Main St #750
Irvine, Ca 92714
714-955-1390

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory:
WEST COAST ANALYTICAL SERVICES

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: [illegible]	Field Logbook No.: –	Date: 1/8/91	Serial No.: № 4833
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB20-5	1/8/91	0830		1	soil							X		
SB20-10		0835										X		
SB20-15		0840										X		
SB20-20		0847										X		
SB20-25		0855										X		
SB20-30		0850										X		
SB20-35		0855										X		
SB20-45		0915										X		
SB20-55		0935										X		
SB21-5		1030										X		
SB21-10		1037										X		
SB21-15		1039										X		
SB21-20		1044										X		
SB21-25		1049										X		

RELINQUISHED BY: (Signature) [signature]	DATE 1/8/91	TIME 1800	RECEIVED BY: (Signature) [signature]	DATE 1-8-91	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17559	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
1920 main st. #750
Irvine, CA 92714
714-955-1390

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory:
West Coast Analytical Services

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: --	Date: 1/8/91	Serial No.: Nº N- 0508
Project Name: JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [illegible]			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB1-5	1/8/91	1645		1	SOIL							X		
SB1-10	↓	1650		↓	↓							X		
SB1-15		1655										X		
SB1-20		1657										X		
SB1-23	↓	1704		↓	↓							X		

RELINQUISHED BY: (Signature) [illegible]	DATE 1/8/91	TIME 1800	RECEIVED BY: (Signature) [illegible]	DATE 1-9-91	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS: # 17559		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory: [illegible]

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2193

December 31, 1990

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Dave Field

JOB NO. 17390

A

LABORATORY REPORT

Samples Received: Nine (9) Soil Samples
Date Received: 12-17-90
Date Released for Analysis: 12-19-90
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Four (4) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 1
Three (3) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 2
Two (2) soils	CAM (17) Metals by ICPMS	Data Sheets
One (1) soil	Volatile Organics by EPA 8260	Data Sheets
One (1) soil	Surrogate Percent Recoveries for EPA 8260	Data Sheet

RECEIVED
JAN 0
LEVINE-FRICKE

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Dave Field

Job # 17390
December 31, 1990

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
T7A-1	ND	ND	ND	ND	1500
T7C-1	ND	ND	ND	ND	ND
T7C-2	ND	ND	ND	ND	ND
T8B-2a	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

Date Analyzed:12-26-90

TABLE 2

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
T7A-1	1000
T8A-2	ND
T8B-2a	ND
Detection Limit	10

ND-Not Detected

Date Analyzed: 12-26-90

Client: Levine-Fricke Sample: T7A-1
Job Number: 17390
Date Analyzed: 12-27-90 File: 7333
271

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.72	0.02	150	500
Arsenic	4	1	50	500
Barium	102	0.2	1000	10000
Beryllium	0.31	0.05	7.5	75
Cadmium	0.42	0.02	10	100
Chromium (III/VI)	22.4	0.3	5600/50	2500/500
Cobalt	8.26	0.02	800	8000
Copper	26	0.3	250	2500
Lead	128 *	0.1	50	1000
Mercury	0.04	0.02	2	20
Molybdenum	0.68	0.03	3500	3500
Nickel	17.1	0.2	200	2000
Selenium	0.8	0.3	10	100
Silver	0.03	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	41	4	240	2400
Zinc	87.3	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: T8A-1
Job Number: 17390
Date Analyzed: 12-27-90 File: 7333
281

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.83	0.02	150	500
Arsenic	4	1	50	500
Barium	103	0.2	1000	10000
Beryllium	0.31	0.05	7.5	75
Cadmium	0.07	0.02	10	100
Chromium (III/VI)	22.1	0.3	5600/50	2500/500
Cobalt	8.61	0.02	800	8000
Copper	80.5	0.3	250	2500
Lead	15.7	0.1	50	1000
Mercury	ND<0.02	0.02	2	20
Molybdenum	0.29	0.03	3500	3500
Nickel	14.5	0.1	200	2000
Selenium	0.8	0.3	10	100
Silver	0.05	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	41	5	240	2400
Zinc	76.1	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

CLIENT: LEVINE FRICKE
WCAS JOB #: 17390

SAMPLE: T8A-1

DATE RECEIVED: 12/17/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: 17390V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	8.	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T8A-1
WCAS JOB #: 17390

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17390

SAMPLE: LAB BLANK

DATE RECEIVED: 12/21/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: VBLK611
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17390

SAMPLE: LAB BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 12/21/90

FILENAME	SAMPLE ID	W/S	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
17390V1	T8A-1	S	107	96	95
VBLK611	LAB BLANK	W	107	95	89

S - SOIL W - WATER

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193
Field Logbook No.: —
Date: 12/17/90
Serial No.: № N- 0769
Project Name: MOBIL - SALK FEE
Project Location: SANTA FE SPRINGS
Sampler (Signature): [signature]
Samplers: SAA

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	418.1	8015 (modified)	CAM	HOLD	RUSH	REMARKS
T8B-1	12/17	1134		1	Soil						X			SAA (0) client came in 12-19-90
T8B-2	12/17	1207		1	Soil				X	X	X			SAA (2) " " " "
T8A-1	12/17	1240		1	Soil			X		X	X			SAA (2) " " " "
T8A-2	12/17	1225		1	Soil				X		X			SAA (1) " " " "
~~T8B-5~~	~~12/17~~			1	Soil						X			SAA (0) " " " "
T7B-3	12/17	1420		1	Soil						X			SAA (0) " " " "
T7B-5	12/17	1510		1	Soil						X			SAA (0) " " " "
T7A-1	12/17	1525		1	Soil				X	X	X			SAA (3) " " " "
T7C-1	12/17	1545		1	Soil					X	X			SAA (1) " " " "
T7C-2	12/17	1555		1	Soil					X	X			SAA (1) " " " "
~~T8B-2~~	~~12/15~~	~~1207~~												
														PLEASE PROVIDE LAB QA/QC DATA

RELINQUISHED BY: (Signature) [signature]	DATE 12/17/90	TIME 535	RECEIVED BY: (Signature) [signature]	DATE 12-17-90	TIME 5:35
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) № 17390	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Ice/Hand Del.	DATE 12/17/90	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
Newport Beach, California 92660
(714) 955-1390 FAX (714) 955-0883

Analytical Laboratory: West Coast Analytical

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2193

December 31, 1990

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Dave Field

JOB NO. 17429 A

LABORATORY REPORT

Samples Received: Fifteen (15) Soil Samples
Date Received: 12/19/90
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Six (6) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Five (5) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Two (2) soils	CAM (17) Metals by ICPMS	Data Sheets
Four (4) soils	Volatile Organics by EPA 8260	Data Sheet
Four (4) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet

RECEIVED
JAN 0
LEVINE-FRICKE

B. Michael Hovanec
Senior Staff Chemist

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Dave Field

Job # 17429
December 31, 1990

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
T5B-2C	ND
T5B-2D	ND
T6A-3	ND
T6A-8	ND
T6B-7A	ND
T7A-1S	ND
Detection Limit	10

ND-Not Detected

Date Analyzed: 12-26-90

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
T5A-1	ND	ND	ND	ND	200
T5B-2A	ND	ND	ND	ND	ND
T6A-3	ND	ND	ND	ND	ND
T6B-7A	ND	ND	ND	ND	ND
T6B-7B	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

Date Analyzed: 12-26-90

Client: Levine-Fricke Sample: T5B-2B
Job Number: 17429
Date Analyzed: 12-27-90 File: 7333
291

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.79	0.02	150	500
Arsenic	4	1	50	500
Barium	129	0.2	1000	10000
Beryllium	0.46	0.05	7.5	75
Cadmium	0.16	0.02	10	100
Chromium (III/VI)	24.9	0.3	5600/50	2500/500
Cobalt	8.22	0.02	800	8000
Copper	32.9	0.3	250	2500
Lead	5.5	0.1	50	1000
Mercury	0.04	0.02	2	20
Molybdenum	0.2	0.03	3500	3500
Nickel	16.6	0.09	200	2000
Selenium	0.7	0.3	10	100
Silver	0.04	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	45	5	240	2400
Zinc	55.9	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: T6B-7A
Job Number: 17429
Date Analyzed: 12-27-90 File: 7333
301

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.78	0.02	150	500
Arsenic	5	1	50	500
Barium	98	0.2	1000	10000
Beryllium	0.36	0.05	7.5	75
Cadmium	0.06	0.02	10	100
Chromium (III/VI)	23.8	0.3	5600/50	2500/500
Cobalt	10.6	0.02	800	8000
Copper	18.9	0.3	250	2500
Lead	5.6	0.1	50	1000
Mercury	0.03	0.02	2	20
Molybdenum	0.23	0.03	3500	3500
Nickel	14.5	0.09	200	2000
Selenium	ND<0.3	0.3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	44	5	240	2400
Zinc	46.3	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: T5A-3

DATE RECEIVED: 12/19/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: 17429V3
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T5A-3
WCAS JOB #: 17429

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: T5B-2A

DATE RECEIVED: 12/19/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: 17429V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T5B-2A
WCAS JOB #: 17429

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: T6A-7

DATE RECEIVED: 12/19/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: 17429V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T6A-7
WCAS JOB #: 17429

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: T7A-1N

DATE RECEIVED: 12/19/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: 17429V4
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	8.	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T7A-1N
WCAS JOB #: 17429

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: LAB BLANK

DATE RECEIVED: 12/21/90
DATE EXTRACTED: 12/21/90
DATE ANALYZED: 12/21/90

RUN NUMBER: VBLK611
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17429

SAMPLE: LAB BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 12/21/90

FILENAME	SAMPLE ID	W/S	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
17429V1	T5B-2A	S	111	99	100
17429V2	T6A-7	S	109	100	99
17429V3	T5A-3	S	111	99	97
17429V4	T7A-1N	S	111	98	95
VBLK611	LAB BLANK	W	107	95	89

S - SOIL W - WATER

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: —	Date: 12/18/90	Serial No.: № N- 0556
Project Name: MOBIL - JALK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SCOTT R. ARMSTRONG

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	418.1	8015 (modified)	CAM	HOLD	RUSH	REMARKS
T7A-1S	12/18	0750		1	Soil				X					
T7A-1N	↓	0805		1	↓			X						
T6R-6	↓	0840		1	↓									
T6R-3	↓	1025		1	↓				X	X				
T5R-1	↓	1430		1	↓					X				
T5B-2R	↓	1440		1	↓			X		X				
Sump-5-Drum	↓	1445		1	↓									
T5B-2B	↓	1450		1	↓						X			
T5B-2C	↓	1518		1	↓				X					
T5B-2D	↓	1530		1	↓				X					
														* PLEASE PROVIDE LAB QA/QC DATA

RELINQUISHED BY: (Signature) [signature]	DATE 12/19/90	TIME 1922	RECEIVED BY: (Signature) [signature] № 17429	DATE 12-19-90	TIME 5:25
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
WEST COAST ANALYTICAL SERVICES

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2173	Field Logbook No.: —	Date: 12/19/90	Serial No.: Nº N- 0766
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: Scott Armstrong

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	418.1	418.1 (modified)	CAM	HOLD	RUSH	REMARKS
T6B-7A	12/19	0800		1	Soil				X	X	X			
T6B-7B	12/19	0815		1	Soil					X				
TSA-3	12/19	0910		1	Soil			X						
T6A-7	12/19	0925		1	Soil			X			~~X~~ Sm			
T6A-8	12/19	1015		1	Soil				X					
														Please provide lab QA/QC data

RELINQUISHED BY: (Signature) [signature]	DATE 12/19/90	TIME 1722	RECEIVED BY: (Signature) [signature]	DATE 12-19-90	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 1 1743	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Packed on ice	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St, Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
Newport Beach, California 92660
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
West Coast Analytical Services

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FORM NO. 86/COC/ARF

2193

December 31, 1990

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Dave Field

JOB NO. 17446

A

LABORATORY REPORT

Samples Received: Twenty-four (24) Soil Samples
Date Received: 12-20-90
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Eleven (11) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 1
Fourteen (14) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 2
Six (6) soils	Volatile Organics by EPA 8260	Data Sheets
Six (6) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet
Three (3) soils	CAM (17) Metals by ICPMS	Data Sheets

RECEIVED
JAN 0
LEVINE-FRICKE

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Dave Field

Job # 17446
December 31, 1990

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
T1A-4	ND	ND	ND	ND	110
T2A-1	ND	ND	ND	ND	ND
T2B-1	ND	ND	ND	ND	ND
T3B-4	ND	ND	ND	ND	ND
T3B-10	ND	ND	ND	7400*	1800
T4A-2	ND	ND	ND	ND	ND
T4A-3	ND	ND	ND	ND	ND
T4B-1A	ND	ND	ND	1700*	390
T4B-3	ND	ND	ND	ND	ND
T8B-2b	ND	ND	ND	ND	ND
TLB-1	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

* carbon range C_7-C_{20}; identity uncertain.

ND - Not Detected

Date Analyzed: 12-28-90

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Dave Field

Job # 17446
December 31, 1990

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
T1A-1	ND
T1A-4	180
T1B-2	ND
T1B-4	ND
T2B-1	ND
T2B-2	28
T2B-6	ND
T3B-10	9900
T4A-3	ND
T4B-1A	4000
T4B-1B	ND
T4B-3	12
TLB-1	90
TLB-5	49
Detection Limit	10

ND-Not Detected

Date Analyzed:12-26-90

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: T1B-1

DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: 17446V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T1B-1
WCAS JOB #: 17446

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: T2A-2

DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: 17446V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: T2A-2
WCAS JOB #: 17446

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: T3B-1

DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: 17446V3
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	13.	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: T3B-1

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: TLA-1

DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: 17446V4
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: TLA-1
WCAS JOB #: 17446

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: TLA-3

DATE RECEIVED: 12/20/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: 17446V5
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: TLA-3
WCAS JOB #: 17446

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: TLB-5

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: LAB BLANK

DATE RECEIVED: 12/26/90
DATE EXTRACTED: 12/26/90
DATE ANALYZED: 12/26/90

RUN NUMBER: VBLK612
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	50.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17446

SAMPLE: LAB BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 12/26/90

FILENAME	SAMPLE ID	W/S	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
17446V1	T1B-1	S	105	98	104
17446V2	T2A-2	S	100	96	105
17446V3	T3B-1	S	99	89	98
17446V4	TLA-1	S	101	97	97
17446V5	TLA-3	S	101	91	94
VBLK612	LAB BLANK	W	101	91	94
17446V6	TLB-5	S	101	89	89

S - SOIL W - WATER

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

Client: Levine-Fricke Sample: T3B-1
Job Number: 17446
Date Analyzed: 12-27-90 File: 7333 331

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.24	0.02	150	500
Arsenic	4	2	50	500
Barium	137	0.2	1000	10000
Beryllium	0.49	0.05	7.5	75
Cadmium	0.33	0.02	10	100
Chromium (III/VI)	27.2	0.3	5600/50	2500/500
Cobalt	9.26	0.02	800	8000
Copper	39.5	0.3	250	2500
Lead	38.5	0.1	50	1000
Mercury	0.04	0.02	2	20
Molybdenum	0.93	0.03	3500	3500
Nickel	22.3	0.2	200	2000
Selenium	0.7	0.3	10	100
Silver	0.06	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	49	5	240	2400
Zinc	113	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: TLA-1
Job Number: 17446
Date Analyzed: 12-27-90 File: 7333 341

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	8.97	0.02	150	500
Arsenic	7	1	50	500
Barium	980	0.2	1000	10000
Beryllium	0.46	0.05	7.5	75
Cadmium	3.64	0.02	10	100
Chromium (III/VI)	32.5	0.3	5600/50	2500/500
Cobalt	9.86	0.02	800	8000
Copper	267 *	0.3	250	2500
Lead	600 *	0.1	50	1000
Mercury	0.15	0.03	2	20
Molybdenum	0.93	0.03	3500	3500
Nickel	20.4	0.6	200	2000
Selenium	2	0.3	10	100
Silver	0.27	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	46	4	240	2400
Zinc	2400	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: TLA-3
Job Number: 17446
Date Analyzed: 12-27-90 File: 7333 351

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.93	0.02	150	500
Arsenic	3	2	50	500
Barium	98.9	0.2	1000	10000
Beryllium	0.55	0.05	7.5	75
Cadmium	0.14	0.02	10	100
Chromium (III/VI)	23	0.3	5600/50	2500/500
Cobalt	8.13	0.02	800	8000
Copper	17.9	0.3	250	2500
Lead	6.6	0.1	50	1000
Mercury	0.03	0.02	2	20
Molybdenum	0.47	0.03	3500	3500
Nickel	15.3	0.08	200	2000
Selenium	1	0.3	10	100
Silver	0.03	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	40	8	240	2400
Zinc	48	0.7	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.:	Date: 12/20/90	Serial No.: № N- 0774
Project Name: JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature] / Tom Shoup			Samplers: Scott Armstrong / Tom Shoup

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	418-1	8015 (modified)	CRM	HOLD	RUSH	REMARKS
T3B-1	12/20	1145		1	Soil			X			X			
T3B-10	12/20	1330		1	Soil				X	X				
T3B-4	12/20	1345		1	Soil					X				
TBB-2	12/20	1430		1	Soil					X				
TLA-1	12/20	—		1	Soil			X			X			
TLA-2	12/20	—		1	Soil									
TLA-3	12/20	1500		1	Soil			X			X			
TLB-1	12/20	—		1	Soil				X	X				
TLB-5	12/20	1600		1	Soil			X	X					

RELINQUISHED BY: (Signature) Tom Shoup	DATE 12/20/90	TIME 4:45	RECEIVED BY: (Signature) [signature]	DATE 12-20-90	TIME 4:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17446	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
Newport Beach, California 92660
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
West Coast Analytical

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 12/20/90	Serial No.: № N- 0773
Project Name: JANK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature] Tom Sh			Samplers: SCOTT ARMSTRONG / Tom Sh

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	418.1	8015 (modified)	CAM	HOLD	RUSH	REMARKS
T4B-1A	12/20	0750		1	Soil				X	X				
T4A-2	↓	0805		↓	↓					X				
T4A-3		0820							X	X				
T4B-3		0830							X	X				
T4B-1B		0845							X					
T2B-1		0930							X	X				
T2B-6		0940							X					
T2B-2		1000							X					
T2A-1		0950								X				
T2A-2		1015						X						
T1B-1		1110						X						
T1B-2		1115							X					
T1A-1		1120							X					
T1B-4		1130							X					
T1A-4	↓	1135		↓	↓				X	X				
				–	–									

RELINQUISHED BY: (Signature) Tom Sharp	DATE 12/20/90	TIME 4:45	RECEIVED BY: (Signature) [signature] # 17446	DATE 12-20-90	TIME 4 45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1920 Main St, Suite [illegible]
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
Newport Beach, California 92660
~~(714) 955-1390 FAX (714) 955-8683~~

Analytical Laboratory: West Coast Analytical Services

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

2193

January 7, 1991

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 17513

A

LABORATORY REPORT

Samples Received: Two (2) Soil Samples
Date Received: 1-2-91
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Two (2) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 1
Two (2) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 2
Two (2) soils	Volatile Organics by EPA 8260	Data Sheets
Two (2) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet
One (1) soil	Semi-Volatile Organics by EPA 8270	Data Sheets
One (1) soil	Surrogate Percent Recoveries for EPA 8270	Data Sheet

B. Michael Hovanec
Senior Staff Chemist

D. J. Northington, Ph.D.
President

RECEIVED
JAN - 8
LEVINE-FRICKE

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 17513
January 7, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SB2-35	ND	ND	ND	ND	ND
SB2-50	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

Date Analyzed: 1-3-91

TABLE 2

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SB2-35	ND
SB2-50	ND
Detection Limit	10

ND - Not Detected

Date Analyzed: 1-4-91

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: SB2-35

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	40.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB2-35
WCAS JOB #: 17513

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: SB2-50

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	40.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB2-50
WCAS JOB #: 17513

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: LAB BLANK

DATE RECEIVED: 01/02/90
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/02/91

RUN NUMBER: VBLK736
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/L (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	40.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17513

UNITS: UG/L (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATE ANALYZED: 01/03/91
INSTRUMENT: 5101

MATRIX: SOIL

SAMPLE #	TOLUENE-D8	BFB	1,2-DICHLORO-ETHANE-D4
LAB BLANK	98	96	100
SB2-35	99	96	100
SB2-50	98	96	99

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: SB2-50

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513B1
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	30.
208-96-8	ACENAPHTHYLENE	ND	30.
120-12-7	ANTHRACENE	ND	30.
56-55-3	BENZO(A)ANTHRACENE	ND	30.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	30.
191-24-2	BENZO(GHI)PERYLENE	ND	30.
50-32-8	BENZO(A)PYRENE	ND	30.
65-85-0	BENZOIC ACID	ND	200.
100-51-6	BENZYL ALCOHOL	ND	30.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	30.
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND	30.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	30.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	200.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	30.
85-68-7	BUTYL BENZYL PHTHALATE	ND	30.
106-47-8	4-CHLOROANILINE	ND	30.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	30.
91-58-7	2-CHLORONAPHTHALENE	ND	30.
95-57-8	2-CHLOROPHENOL	ND	30.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	30.
218-01-9	CHRYSENE	ND	30.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	30.
132-64-9	DIBENZOFURAN	ND	30.
84-74-2	DI-N-BUTYL PHTHALATE	ND	30.
95-50-1	1,2-DICHLOROBENZENE	ND	30.
541-73-1	1,3-DICHLOROBENZENE	ND	30.
106-46-7	1,4-DICHLOROBENZENE	ND	30.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	70.
120-33-2	2,4-DICHLOROPHENOL	ND	30.
84-66-2	DIETHYL PHTHALATE	ND	30.
105-67-9	2,4-DIMETHYLPHENOL	ND	30.
131-11-3	DIMETHYL PHTHALATE	ND	30.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	200.
51-28-5	2,4-DINITROPHENOL	ND	200.
121-14-2	2,4-DINITROTOLUENE	ND	30.
606-20-2	2,6-DINITROTOLUENE	ND	30.
117-84-0	DI-N-OCTYL PHTHALATE	ND	30.
206-44-0	FLUORANTHENE	ND	30.
86-73-7	FLUORENE	ND	30.
118-74-1	HEXACHLOROBENZENE	ND	30.
87-68-3	HEXACHLOROBUTADIENE	ND	30.
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	30.
67-72-1	HEXACHLOROETHANE	ND	30.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	30.
78-59-1	ISOPHORONE	ND	30.
91-57-6	2-METHYLNAPHTHALENE	ND	30.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: SB2-50

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513B1
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
95-48-7	2-METHYLPHENOL	ND	30.
106-44-5	4-METHYLPHENOL	ND	30.
91-20-3	NAPHTHALENE	ND	30.
88-74-4	2-NITROANILINE	ND	200.
99-09-2	3-NITROANILINE	ND	200.
100-01-6	4-NITROANILINE	ND	200.
98-95-3	NITROBENZENE	ND	30.
88-75-5	2-NITROPHENOL	ND	30.
100-02-7	4-NITROPHENOL	ND	200.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	30.
621-64-7	N-NITROSODIPROPYLAMINE	ND	30.
87-86-5	PENTACHLOROPHENOL	ND	200.
85-01-8	PHENANTHRENE	ND	30.
108-95-2	PHENOL	ND	30.
129-00-0	PYRENE	ND	30.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	30.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	200.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	30.

** - Cannot be separated from diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: SB2-50

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	BNA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: METHOD BLANK

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513B2
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
83-32-9	ACENAPHTHENE	ND	30.
208-96-8	ACENAPHTHYLENE	ND	30.
120-12-7	ANTHRACENE	ND	30.
56-55-3	BENZO(A)ANTHRACENE	ND	30.
205-99-2	BENZO(B & K)FLUORANTHENES	ND	30.
191-24-2	BENZO(GHI)PERYLENE	ND	30.
50-32-8	BENZO(A)PYRENE	ND	30.
65-85-0	BENZOIC ACID	ND	200.
100-51-6	BENZYL ALCOHOL	ND	30.
111-91-1	BIS(2-CHLOROETHOXY)METHANE	ND	30.
111-44-4	BIS(2-CHLOROETHYL)ETHER	ND	30.
39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER	ND	30.
117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	200.
101-55-3	4-BROMOPHENYL PHENYL ETHER	ND	30.
85-68-7	BUTYL BENZYL PHTHALATE	ND	30.
106-47-8	4-CHLOROANILINE	ND	30.
59-50-7	4-CHLORO-3-METHYLPHENOL	ND	30.
91-58-7	2-CHLORONAPHTHALENE	ND	30.
95-57-8	2-CHLOROPHENOL	ND	30.
7005-72-3	4-CHLOROPHENYL PHENYL ETHER	ND	30.
218-01-9	CHRYSENE	ND	30.
53-70-3	DIBENZO(A,H)ANTHRACENE	ND	30.
132-64-9	DIBENZOFURAN	ND	30.
84-74-2	DI-N-BUTYL PHTHALATE	ND	30.
95-50-1	1,2-DICHLOROBENZENE	ND	30.
541-73-1	1,3-DICHLOROBENZENE	ND	30.
106-46-7	1,4-DICHLOROBENZENE	ND	30.
91-94-1	3,3'-DICHLOROBENZIDINE	ND	70.
120-33-2	2,4-DICHLOROPHENOL	ND	30.
84-66-2	DIETHYL PHTHALATE	ND	30.
105-67-9	2,4-DIMETHYLPHENOL	ND	30.
131-11-3	DIMETHYL PHTHALATE	ND	30.
534-52-1	4,6-DINITRO-2-METHYLPHENOL	ND	200.
51-28-5	2,4-DINITROPHENOL	ND	200.
121-14-2	2,4-DINITROTOLUENE	ND	30.
606-20-2	2,6-DINITROTOLUENE	ND	30.
117-84-0	DI-N-OCTYL PHTHALATE	ND	30.
206-44-0	FLUORANTHENE	ND	30.
86-73-7	FLUORENE	ND	30.
118-74-1	HEXACHLOROBENZENE	ND	30.
87-68-3	HEXACHLOROBUTADIENE	ND	30.
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	30.
67-72-1	HEXACHLOROETHANE	ND	30.
193-39-5	INDENO(1,2,3-CD)PYRENE	ND	30.
78-59-1	ISOPHORONE	ND	30.
91-57-6	2-METHYLNAPHTHALENE	ND	30.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: METHOD BLANK

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/02/91
DATE ANALYZED: 01/03/91

RUN NUMBER: 17513B2
SAMPLE AMOUNT: 30G:1ML
MATRIX: SOIL

SEMI-VOLATILE ORGANICS (EPA 625/8270)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
95-48-7	2-METHYLPHENOL	ND	30.
106-44-5	4-METHYLPHENOL	ND	30.
91-20-3	NAPHTHALENE	ND	30.
88-74-4	2-NITROANILINE	ND	200.
99-09-2	3-NITROANILINE	ND	200.
100-01-6	4-NITROANILINE	ND	200.
98-95-3	NITROBENZENE	ND	30.
88-75-5	2-NITROPHENOL	ND	30.
100-02-7	4-NITROPHENOL	ND	200.
86-30-6	N-NITROSODIPHENYLAMINE **	ND	30.
621-64-7	N-NITROSODIPROPYLAMINE	ND	30.
87-86-5	PENTACHLOROPHENOL	ND	200.
85-01-8	PHENANTHRENE	ND	30.
108-95-2	PHENOL	ND	30.
129-00-0	PYRENE	ND	30.
120-82-1	1,2,4-TRICHLOROBENZENE	ND	30.
95-95-4	2,4,5-TRICHLOROPHENOL	ND	200.
88-06-2	2,4,6-TRICHLOROPHENOL	ND	30.

** - Cannot be separated from diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17513

SAMPLE: METHOD BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	BNA	

SEMI-VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATE ANALYZED: 01/03/91
INSTRUMENT: 4500

MATRIX: SOIL

SAMPLE #	NITRO-BENZENE-D5	2-FLUORO-BIPHENYL	TERPHENYL-D14	PHENOL-D5	2-FLUORO-PHENOL	TRIBROMO-PHENOL
SB2-50	74	88	90	76	72	79
METHOD BLANK	84	96	90	86	79	106

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: —	Date: 1/2/91	Serial No.: Nº N- 0561
Project Name: MOBIL Juke Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers:

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240	8270	418.1	8015-MOD.	HOLD	RUSH	REMARKS
SB2-50	1/2/91	1005		1	Soil			X	X	ϕ	ϕ		X	ϕ INDICATES NORMAL TAT
SB2-35	1/2/91	0934		1	Soil			ϕ		ϕ	ϕ	NA		
														PLEASE PERFORM A 24-HOUR RUSH ON CHEMICAL ANALYSIS (8240 + 8270) OF SOIL SAMPLE SB2-50
														PLEASE REPORT RESULTS TO ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 1/2/91	TIME 1100a	RECEIVED BY: (Signature) [signature]	DATE 1/2/91	TIME 11:00a
RELINQUISHED BY: (Signature) Anthony Silva	DATE 1/2/91	TIME 11:30a	RECEIVED BY: (Signature) [signature]	DATE 1-2-91	TIME 11:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 017513	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
WEST COAST ANALYTICAL SERVICES, INC.
SANTA Fe SPRINGS, CA.

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-1	SB5 @ 15'	03 JAN 91

PARAMETER	01-006-1
Nitric Acid Digestion with HCl, Date	01/07/91
Nitric Acid Digestion, Date	01/09/91
Antimony, mg/kg	7.1
Arsenic, mg/kg	<0.4
Barium, mg/kg	120
Beryllium, mg/kg	0.08
Cadmium, mg/kg	<0.06
Chromium, mg/kg	20
Cobalt, mg/kg	10
Copper, mg/kg	37
Lead, mg/kg	<0.04
Mercury, mg/kg	<0.3
Molybdenum, mg/kg	<0.08
Nickel, mg/kg	22
Selenium, mg/kg	0.8
Silver, mg/kg	<0.02
Thallium, mg/kg	<0.8
Vanadium, mg/kg	18
Zinc, mg/kg	64

RECEIVED
JAN 5
LEVINE-FRICKE

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-2	SB13 @ 25'	03 JAN 91

PARAMETER	01-006-2
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/08/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---
EPA Method 8020	
Date Analyzed	01/07/91
Date Extracted	01/07/91
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/08/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---
EPA Method 8020	
Date Analyzed	01/07/91
Date Extracted	01/07/91
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	01/08/91
Date Extracted	01/08/91
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
2-Hexanone, ug/kg	<50
Acetone, ug/kg	<50
Acrolein, ug/kg	<100
Acrylonitrile, ug/kg	<100
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Benzene, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<10

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Carbon Disulfide, ug/kg	<10
Dibromochloromethane, ug/kg	<5
Ethylbenzene, ug/kg	<5
Freon 113, ug/kg	<5
Methyl ethyl ketone, ug/kg	<50
Methyl isobutyl ketone, ug/kg	<25
Methylene chloride, ug/kg	<5
Styrene, ug/kg	<5
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Toluene, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl acetate, ug/kg	<25
Vinyl chloride, ug/kg	<5
Total Xylene Isomers, ug/kg	<25
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-4	SB6 @ 15'	03 JAN 91
01-006-5	SB13 @ 10'	03 JAN 91
01-006-6	SB17 @ 10'	03 JAN 91

PARAMETER	01-006-4	01-006-5	01-006-6
Sample Held, Not Analyzed	HOLD	HOLD	HOLD

Charles Jacks

Charles Jacks, Ph.D., Laboratory Manager

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

A91-01-006

Project No.: 2193	Field Logbook No.: —	Date: 1/4/91	Serial No.: № 4747
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	8260 ~~EPA 624~~	8020	418.1	8015 (mod)	CAM	HOLD	RUSH	REMARKS
SB5-15	1/3/91	0837		1	Soil						X			
SB6-15	1/3/91	0923		1	↓							X		
SB13-10	1/2/91	1505		1	↓							X		
SB13-25	1/2/91	1530		1	↓			X	X	X				
SB17-10	1/3/91	1205		1	↓									
SB18-25	1/3/91	1357		1	↓		X	X	X	X				per phone conversation w/ Anthony Silva 1/4/91 8240.22 method OK for 8260. SB17-10 should be on HOLD. C Strahan 1/4/91
														PLEASE REPORT RESULTS TO Anthony Silva

RELINQUISHED BY: (Signature) [signature]	DATE 1/4/91	TIME 1336	RECEIVED BY: (Signature) Eric Strahan	DATE 1/4/91	TIME 1:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS: Samples received chilled		

Sample Collector:
[illegible] ST, #750
IRVINE, CA 92714

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500
714-955-1390

Analytical Laboratory:
B.C. Analytical

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-1	SB5 @ 15'	03 JAN 91

PARAMETER	01-006-1
Nitric Acid Digestion with HCl, Date	01/07/91
Nitric Acid Digestion, Date	01/09/91
Antimony, mg/kg	7.1
Arsenic, mg/kg	<0.4
Barium, mg/kg	120
Beryllium, mg/kg	0.08
Cadmium, mg/kg	<0.06
Chromium, mg/kg	20
Cobalt, mg/kg	10
Copper, mg/kg	37
Lead, mg/kg	<0.04
Mercury, mg/kg	<0.3
Molybdenum, mg/kg	<0.08
Nickel, mg/kg	22
Selenium, mg/kg	0.8
Silver, mg/kg	<0.02
Thallium, mg/kg	<0.8
Vanadium, mg/kg	18
Zinc, mg/kg	64

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BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-2	SB13 @ 25'	03 JAN 91

PARAMETER	01-006-2
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/08/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---
EPA Method 8020	
Date Analyzed	01/07/91
Date Extracted	01/07/91
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<5

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Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/08/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---
EPA Method 8020	
Date Analyzed	01/07/91
Date Extracted	01/07/91
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<5

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Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	01/08/91
Date Extracted	01/08/91
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
2-Hexanone, ug/kg	<50
Acetone, ug/kg	<50
Acrolein, ug/kg	<100
Acrylonitrile, ug/kg	<100
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Benzene, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<10

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BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-3	SB18 @ 25'	03 JAN 91

PARAMETER	01-006-3
Carbon Disulfide, ug/kg	<10
Dibromochloromethane, ug/kg	<5
Ethylbenzene, ug/kg	<5
Freon 113, ug/kg	<5
Methyl ethyl ketone, ug/kg	<50
Methyl isobutyl ketone, ug/kg	<25
Methylene chloride, ug/kg	<5
Styrene, ug/kg	<5
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Toluene, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl acetate, ug/kg	<25
Vinyl chloride, ug/kg	<5
Total Xylene Isomers, ug/kg	<25
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5

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BCA B C Analytical

Analytical Report

LOG NO: 91-01-006

Received: 04 JAN 91
Reported: 11 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-006-4	SB6 @ 15'	03 JAN 91
01-006-5	SB13 @ 10'	03 JAN 91
01-006-6	SB17 @ 10'	03 JAN 91

PARAMETER	01-006-4	01-006-5	01-006-6
Sample Held, Not Analyzed	HOLD	HOLD	HOLD

Charles Jacks

Charles Jacks, Ph.D., Laboratory Manager

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BCA B C Analytical

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

A91-01-006

Project No.: 2193	Field Logbook No.: –	Date: 1/4/91	Serial No.: № 4747
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	8260 ~~EPA 624~~	8020	418.1	8015 (mod)	CAM	HOLD	RUSH	REMARKS
SB5-15	1/3/91	0837		1	Soil						X			
SB6-15	1/3/91	0923		1	↓							X		
SB13-10	1/2/91	1505		1	↓							X		
SB13-25	1/2/91	1530		1	↓			X	X	X				
SB17-10	1/3/91	1205		1	↓									
SB18-25	1/3/91	1357		1	↓		X	X	X	X				per phone conversation w/ Anthony Silva 1/4/91 8240.LL method OK for 8260. SB17-10 should be on HOLD. C Strahan 1/4/91
														PLEASE REPORT RESULTS TO ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 1/4/91	TIME 1336	RECEIVED BY: (Signature) Eric Strahan	DATE 1/4/91	TIME 1:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS: Samples received chilled		

Sample Collector:
1920 Main St, #750
Irvine, CA 92714

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500
714-955-1390

Analytical Laboratory:
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FORM NO. 86/COC/ARF

Analytical Report

2193

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-1	SB9 @ 5'	08 JAN 91

PARAMETER	01-032-1
Nitric Acid Digestion with HCl, Date	01/14/91
Nitric Acid Digestion, Date	01/14/91
Antimony, mg/kg	3.3
Arsenic, mg/kg	1.7
Barium, mg/kg	79
Beryllium, mg/kg	0.02
Cadmium, mg/kg	0.15
Chromium, mg/kg	16
Cobalt, mg/L	6.8
Copper, mg/kg	13
Lead, mg/L	<0.8
Mercury, mg/kg	<0.3
Molybdenum, mg/kg	0.13
Nickel, mg/kg	13
Selenium, mg/kg	<0.4
Silver, mg/kg	<0.02
Thallium, mg/kg	<8
Vanadium, mg/kg	21
Zinc, mg/kg	34
Petroleum Hydrocarbons (418.1), mg/kg	11

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Analytical Report

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-1	SB9 @ 5'	08 JAN 91

PARAMETER	01-032-1
TPH - Modified 8015	
Date Analyzed	01/10/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---

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Analytical Report

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
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Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-2	SB14 @ 25'	08 JAN 91

PARAMETER	01-032-2
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/10/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---

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Analytical Report

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-2	SB14 @ 25'	08 JAN 91

PARAMETER	01-032-2
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	01/11/91
Date Extracted	01/11/91
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
2-Hexanone, ug/kg	<50
Acetone, ug/kg	<50
Acrolein, ug/kg	<100
Acrylonitrile, ug/kg	<100
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Benzene, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<10

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Analytical Report

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-2	SB14 @ 25'	08 JAN 91

PARAMETER	01-032-2
Carbon Disulfide, ug/kg	<10
Dibromochloromethane, ug/kg	<5
Ethylbenzene, ug/kg	<5
Freon 113, ug/kg	<5
Methyl ethyl ketone, ug/kg	<50
Methyl isobutyl ketone, ug/kg	<25
Methylene chloride, ug/kg	<5
Styrene, ug/kg	<5
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Toluene, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl acetate, ug/kg	<25
Vinyl chloride, ug/kg	<5
Total Xylene Isomers, ug/kg	<25
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5

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Analytical Report

LOG NO: A91-01-032

Received: 09 JAN 91
Reported: 18 JAN 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Santa Fe Springs

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
01-032-3	SB22 @ 25'	08 JAN 91

PARAMETER	01-032-3
Petroleum Hydrocarbons (418.1), mg/kg	<10
TPH - Modified 8015	
Date Analyzed	01/10/91
Dilution Factor, Times	1
Total Fuel Hydrocarbons, mg/kg	<5
Other TPH - Modified 8015	---
EPA Method 8020	
Date Analyzed	01/11/91
Date Extracted	01/11/91
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<5

Charles Jacks

Charles Jacks, Ph.D., Laboratory Manager

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
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BCA B C Analytical

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

A91-01-032

Project No.: 2193	Field Logbook No.: –	Date: 1/8/91	Serial No.: Nº N- 0791
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [illegible]			Samplers: [illegible]

SAMPLES / ANALYSES

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	8015 ~~EPA 624~~	8020	418.1	8015(mod)	CAM	HOLD	RUSH	REMARKS
SB9-5	1/8/91	1120		1	Soil				X	X	X			
SB14-25	1/8/91	1135		1	Soil		X		X	X				
SB22-25	1/8/91	1515		1	Soil			X	X	X				

RELINQUISHED BY: (Signature) [illegible]	DATE 1/8/91	TIME 1530	RECEIVED BY: (Signature) Eric Strahan	DATE 1/9/91	TIME 3:30 pm
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:
B.C. Analytical

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FORM NO. [illegible]

2193

January 11, 1991

WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 17519

A

LABORATORY REPORT

Samples Received: Thirty (30) Soil Samples
Date Received: 1-2-91
Date Released for Analysis: 1-4-91
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Nine (9) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Nine (9) soils	Fuel Hydrocarbon by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Four (4) soils	Volatile Organics by EPA 8260	Data Sheets
Four (4) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet
One (1) soil	CAM (17) Metals by ICPMS	Data Sheet
Six (6) soils	Volatile Aromatics by EPA 8020	Data Sheets

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

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WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 17519
January 11, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SB2-15	ND
SB10-5	13
SB10-20	ND
SB11-5	ND
SB11-25	16
SB12-10	ND
SB12-20	ND
SB13-5	ND
SB13-25	ND
Detection Limit	10

ND - Not Detected
Date Analyzed: 1-9-91

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SB2-15	ND	ND	ND	ND	ND
SB10-5	ND	ND	ND	ND	ND
SB10-20	ND	ND	ND	ND	ND
SB11-5	ND	ND	ND	ND	ND
SB11-25	ND	ND	ND	ND	ND
SB12-10	ND	ND	ND	ND	ND
SB12-20	ND	ND	ND	ND	ND
SB13-5	ND	ND	ND	ND	ND
SB13-25	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected
Date Analyzed: 1-9-91

Client: LEVINE-FRICKE Sample: SB2-15
Job Number: 17519
Date Analyzed: 01-09-91 File: 7529
241

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.8	0.2	150	500
Arsenic	3.6	0.5	50	500
Barium	173	0.07	1000	10000
Beryllium	0.43	0.02	7.5	75
Cadmium	0.04	0.02	10	100
Chromium (III/VI)	24.9	0.4	5600/50	2500/500
Cobalt	10.9	0.02	800	8000
Copper	24.1	0.09	250	2500
Lead	6.94	0.02	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.22	0.02	3500	3500
Nickel	21.4	0.3	200	2000
Selenium	0.5	0.1	10	100
Silver	0.03	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	42	3	240	2400
Zinc	66.8	0.5	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB10-5
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	2	1
Toluene	1	1
Total Xylenes	9	1
Surrogate Percent Recovery:	100	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB10-20
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	2	1
Toluene	1	1
Total Xylenes	6	1
Surrogate Percent Recovery:	98	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB12-10
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	3	1
Surrogate Percent Recovery:	102	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB12-25
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	1	1
Toluene	2	1
Total Xylenes	3	1
Surrogate Percent Recovery:	84	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB13-5
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	2	1

Surrogate Percent Recovery: 94

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB13-25
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 85

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17519
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: METHOD BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	2	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 78

ND-Not Detected. The limit of detection is reported above.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17519

SAMPLE: SB11-5

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/07/91
DATE ANALYZED: 01/07/91

RUN NUMBER: 17519V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB11-5
WCAS JOB #: 17519

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17519

SAMPLE: SB11-25

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/07/91
DATE ANALYZED: 01/07/91

RUN NUMBER: 17519V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB11-25
WCAS JOB #: 17519

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17519

SAMPLE: SB12-10

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/07/91
DATE ANALYZED: 01/07/91

RUN NUMBER: 17519V3
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB12-10
WCAS JOB #: 17519

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17519

SAMPLE: SB12-20

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/07/91
DATE ANALYZED: 01/07/91

RUN NUMBER: 17519V4
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SB12-20
WCAS JOB #: 17519

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 17519

SAMPLE: LAB BLANK

DATE RECEIVED: 01/02/91
DATE EXTRACTED: 01/07/91
DATE ANALYZED: 01/07/91

RUN NUMBER: VBLK739
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17519

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATE ANALYZED: 01/07/91
INSTRUMENT: 5101

MATRIX: SOIL

SAMPLE #	TOLUENE-D8	BFB	1,2-DICHLORO-ETHANE-D4
LAB BLANK	98	96	94
SB11-5	99	96	98
SB11-25	100	97	98
SB12-10	99	98	99
SB12-20	99	97	98

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 1/2/91	Serial No.: № N- 0560
Project Name: Jack FEE	Project Location: [illegible]		
Sampler (Signature): [illegible]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB10-5	1/2/91	1255		1	Soil							X		
SB10 10	↓	1300		1	↓							X		
SB10-15		1305		1								X		
SB10-20		1315		1								X		
SB10-25		1320		1								X		
SB11-5		1140		1								X		
SB11-10		1145		1								X		
SB11-15		1156		1								X		
SB11-20		1205		1								X		
SB11-25		1215		1								X		
SB12-5		1355		1								X		
SB12-10		1403		1								X		
SB12-15		1410		1								X		
SB12-20		1420		1								X		
SB12-25	↓	1427		1	↓							X		

RELINQUISHED BY: (Signature) [illegible]	DATE 1/2/91	TIME 1730	RECEIVED BY: (Signature) April Richards WCAS # 17519	DATE 1/3/91	TIME 2:35pm
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON DUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
Newport Beach, California 92660
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
WEST COAST [illegible]

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2173	Field Logbook No.: —	Date: 1/2/91	Serial No.: Nº N- 0559
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			

SAMPLES						ANALYSES								Samplers: [signature]
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB2-5	1/2/91	0340		1	Soil							X		
SB2-10	↓	0351		1	↓							X		
SB2-15		0357		1								X		
SB2-20		0707		1								X		
SB2-25		0714		1								X		
SB2-30		0726		1								X		
~~SB2-35~~		~~0734~~		~~1~~								~~X~~		
SB2-40		0744		1								X		
SB2-45		0954		1								X		
SB2-55		1025		1								X		
SB2-60	↓	1030		1	↓							X		
SB13-5	1/2/91	1457		1	Soil							X		
SB13-10	↓	1505		1	↓							X		
SB13-15		1510		1								X		
SB13-20		1520		1								X		
SB13-25	↓	1530		1	↓							X		

RELINQUISHED BY: (Signature) [signature]	DATE 1/2/91	TIME 1730	RECEIVED BY: (Signature) April Richards NCAS	DATE 1/2/91	TIME 5:45 pm
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17519	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Packed on Blue ice	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
West Coast Analytical

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

2193

January 14, 1991

WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 17529

A

LABORATORY REPORT

Samples Received: Forty-nine (49) Soil Samples
Date Received: 1-3-91
Date Released for Analysis: 1-4-91
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Sixteen (16) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Sixteen (16) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Seven (7) soils	CAM (17) Metals by ICPMS	Data Sheets
Two (2) soils	QC Summary by ICPMS	Data Sheet
Seven (7) soils	Volatile Aromatics by EPA 8020	Data Sheets

RECEIVED
JAN 6
LEVINE-FRICKE

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 17529
January 14, 1991

LABORATORY REPORT

Samples Analyzed	Analysis	Results
Fourteen (14) soils	Volatile Organics by EPA 8260	Data Sheets
Fourteen (14) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 17529
January 14, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SB4-10	ND
SB4-25	ND
SB5-10	ND
SB5-25	ND
SB6-10	ND
SB6-25	ND
SB7-10	ND
SB7-30	ND
SB15-5	ND
SB15-20	ND
SB17-5	ND
SB17-20	ND
SB18-5	ND
SB18-25	ND
SB19-10	ND
SB19-15	ND
Detection Limit	10

ND - Not Detected

Date Analyzed: 1-9-91

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 17529
January 14, 1991

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SB4-10	ND	ND	ND	ND	ND
SB4-25	ND	ND	ND	ND	ND
SB5-10	ND	ND	ND	ND	ND
SB5-25	ND	ND	ND	ND	ND
SB6-10	ND	ND	ND	ND	ND
SB6-25	ND	ND	ND	ND	ND
SB7-10	ND	ND	ND	ND	ND
SB7-30	ND	ND	ND	ND	ND
SB15-5	ND	ND	ND	ND	ND
SB15-20	ND	ND	ND	ND	ND
SB17-5	ND	ND	ND	ND	ND
SB17-20	ND	ND	ND	ND	ND
SB18-5	ND	ND	ND	ND	ND
SB18-25	ND	ND	ND	ND	ND
SB19-10	ND	ND	ND	ND	ND
SB19-15	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

Date Analyzed: 1-11-91

Client: LEVINE-FRICKE Sample: SB4a-10
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
341

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.21	0.06	150	500
Arsenic	7.6	0.6	50	500
Barium	157	0.06	1000	10000
Beryllium	0.61	0.02	7.5	75
Cadmium	0.05	0.02	10	100
Chromium (III/VI)	29.8	0.3	5600/50	2500/500
Cobalt	10.4	0.02	800	8000
Copper	21.7	0.2	250	2500
Lead	7.07	0.06	50	1000
Mercury	ND<0.02	0.02	2	20
Molybdenum	0.26	0.02	3500	3500
Nickel	21.5	0.2	200	2000
Selenium	0.8	0.2	10	100
Silver	0.03	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	51	4	240	2400
Zinc	54.3	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB4a-15
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
261

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.63	0.06	150	500
Arsenic	2.7	0.7	50	500
Barium	147	0.06	1000	10000
Beryllium	0.37	0.02	7.5	75
Cadmium	0.09	0.02	10	100
Chromium (III/VI)	21.8	0.3	5600/50	2500/500
Cobalt	8.14	0.02	800	8000
Copper	17.6	0.2	250	2500
Lead	4.98	0.06	50	1000
Mercury	ND<0.02	0.02	2	20
Molybdenum	0.11	0.02	3500	3500
Nickel	15	2	200	2000
Selenium	0.7	0.2	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	34.6	1	240	2400
Zinc	49.1	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB5a-10
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
271

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.77	0.06	150	500
Arsenic	6.6	0.5	50	500
Barium	94.3	0.06	1000	10000
Beryllium	0.57	0.02	7.5	75
Cadmium	0.04	0.02	10	100
Chromium (III/VI)	19.9	0.3	5600/50	2500/500
Cobalt	6.16	0.02	800	8000
Copper	19.6	0.2	250	2500
Lead	5.97	0.06	50	1000
Mercury	0.02	0.02	2	20
Molybdenum	0.15	0.02	3500	3500
Nickel	16	0.09	200	2000
Selenium	0.7	0.2	10	100
Silver	0.03	0.02	50	500
Thallium	0.08	0.02	70	700
Vanadium	37	3	240	2400
Zinc	41.3	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB5a-15
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
281

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.7	0.06	150	500
Arsenic	1.5	0.5	50	500
Barium	180	0.06	1000	10000
Beryllium	0.64	0.02	7.5	75
Cadmium	0.07	0.02	10	100
Chromium (III/VI)	39.2	0.3	5600/50	2500/500
Cobalt	10.5	0.02	800	8000
Copper	27.4	0.2	250	2500
Lead	7.03	0.06	50	1000
Mercury	0.02	0.02	2	20
Molybdenum	0.25	0.02	3500	3500
Nickel	27.9	0.5	200	2000
Selenium	0.9	0.2	10	100
Silver	0.15	0.02	50	500
Thallium	0.2	0.02	70	700
Vanadium	43	2	240	2400
Zinc	78.2	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB6a-10
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
291

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.64	0.06	150	500
Arsenic	2.9	0.6	50	500
Barium	70.8	0.06	1000	10000
Beryllium	0.23	0.02	7.5	75
Cadmium	0.04	0.02	10	100
Chromium (III/VI)	11.7	0.3	5600/50	2500/500
Cobalt	4.7	0.02	800	8000
Copper	12.1	0.2	250	2500
Lead	3.33	0.06	50	1000
Mercury	ND<0.02	0.02	2	20
Molybdenum	0.28	0.02	3500	3500
Nickel	9.03	0.1	200	2000
Selenium	ND<0.2	0.2	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.04	0.02	70	700
Vanadium	27	3	240	2400
Zinc	29.3	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB7a-10
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529 301

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.77	0.06	150	500
Arsenic	6.9	0.5	50	500
Barium	105	0.06	1000	10000
Beryllium	0.53	0.02	7.5	75
Cadmium	0.02	0.02	10	100
Chromium (III/VI)	20.3	0.3	5600/50	2500/500
Cobalt	7.61	0.02	800	8000
Copper	21.1	0.2	250	2500
Lead	6.21	0.06	50	1000
Mercury	ND<0.02	0.02	2	20
Molybdenum	0.31	0.02	3500	3500
Nickel	14.9	0.06	200	2000
Selenium	1.2	0.2	10	100
Silver	0.05	0.02	50	500
Thallium	0.1	0.02	70	700
Vanadium	37	4	240	2400
Zinc	43.8	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE Sample: SB7a-15
Job Number: 17529
Date Analyzed: 01-09-91 File: 7529
311

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.73	0.06	150	500
Arsenic	2.2	0.4	50	500
Barium	146	0.06	1000	10000
Beryllium	0.45	0.02	7.5	75
Cadmium	0.05	0.02	10	100
Chromium (III/VI)	19.5	0.3	5600/50	2500/500
Cobalt	8.64	0.02	800	8000
Copper	17.9	0.2	250	2500
Lead	5.78	0.06	50	1000
Mercury	0.03	0.02	2	20
Molybdenum	0.26	0.02	3500	3500
Nickel	17.2	0.3	200	2000
Selenium	0.6	0.2	10	100
Silver	0.03	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	35	3	240	2400
Zinc	54.2	0.6	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke
Job Number: 17529
Date Analyzed: 1-09-91
Matrix: Soil

Sample: SB4a-10

Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million

	Sample 7529 341	Duplicate 7529 351	RPD %	Spike Conc ppm	Spk Rslt 7529 361	% Recovery	Detect. Limit
Beryllium	0.61	0.63	3.2	20	21.9	106.4	0.02
Vanadium	51	50		20	70		5
Chromium	29.8	29.9	0.3	20	51.2		0.3
Cobalt	10.4	10.4	0	20	29.9	97.5	0.02
Nickel	21.5	21.4	0.5	20	41.7		0.2
Copper	21.7	21.5	0.9	20	39.2		0.2
Zinc	54.3	53.1	2.2	20	71.6		0.6
Arsenic	7.6	7.6		20	27	97	1
Selenium	0.8	1		200	188	93.6	0.2
Molybdenum	0.26	0.27		20	20	98.7	0.02
Silver	0.03	ND<0.02		20	18.1	90.4	0.02
Cadmium	0.05	0.05		20	18.1	90.3	0.05
Antimony	1.21	0.92		20	14.5	67.2	0.06
Barium	157	153	2.6	20	214		0.06
Mercury	ND<0.02	0.07		2	2.24	110.3	0.02
Thallium	0.13	0.11		20	19.9	98.9	0.02
Lead	7.07	6.9	2.4	20	29	110.1	0.06

Client: Levine-Fricke Sample: SB4a-10
Job Number: 17529
Date Analyzed: 1-09-91
Matrix: Soil

Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million

	Sample		MS		MSD		
	7529 341	Spike Conc ppm	7529 361	% Recovery	7529 371	% Recovery	RPD %
Beryllium	0.61	20	21.9	106.5	22	107	0.5
Vanadium	51	20	70		71		1.4
Chromium	29.8	20	51.2		51.2		0
Cobalt	10.4	20	29.9	97.5	29.9	97.5	0
Nickel	21.5	20	41.7		41.8		0.2
Copper	21.7	20	39.2		40		2
Zinc	54.3	20	71.6		72.1		0.7
Arsenic	7.6	20	27	97	25	87	7.7
Selenium	0.8	200	188	93.6	188	93.6	0
Molybdenum	0.26	20	20	98.7	19.9	98.2	0.5
Silver	0.03	20	18.1	90.4	18.7	93.4	3.3
Cadmium	0.05	20	18.1	90.3	18.5	92.3	2.2
Antimony	1.21	20	14.5	66.5	16.7	77.5	14.1
Barium	157	20	214		182		16.2
Mercury	ND<0.02	2	2.24	112	2.25	112.5	0.4
Thallium	0.13	20	19.9	98.8	19.3	95.9	3.1
Lead	7.07	20	29	109.7	29	109.7	0

Client: LEVINE-FRICKE
Job No: 17529
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB7-15
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 85

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17529
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: SB15-10
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	8	1
Toluene	ND	1
Total Xylenes	66	1

Surrogate Percent Recovery: 93

ND-Not Detected. The limit of detection is reported above.

Client:	LEVINE-FRICKE	Sample:	SB15-25
Job No:	17529		
Date		Matrix:	Soil
Analyzed:	10-Jan-91	Samp Amt:	1 gm
Analysis:	EPA 602 (8020)	Dil Fact:	1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 91

ND-Not Detected. The limit of detection is reported above.

Client:	LEVINE-FRICKE	Sample:	SB18-5
Job No:	17529		
Date		Matrix:	Soil
Analyzed:	10-Jan-91	Samp Amt:	1 gm
Analysis:	EPA 602 (8020)	Dil Fact:	1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 78

ND-Not Detected. The limit of detection is reported above.

Client:	LEVINE-FRICKE	Sample:	SB18-25
Job No:	17529		
Date		Matrix:	Soil
Analyzed:	10-Jan-91	Samp Amt:	1 gm
Analysis:	EPA 602 (8020)	Dil Fact:	1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 96

ND-Not Detected. The limit of detection is reported above.

Client:	LEVINE-FRICKE	Sample:	SB19-10
Job No:	17529		
Date		Matrix:	Soil
Analyzed:	10-Jan-91	Samp Amt:	1 gm
Analysis:	EPA 602 (8020)	Dil Fact:	1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 89

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17529
Date Analyzed: 11-Jan-91
Analysis: EPA 602 (8020)

Sample: SB19-15
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	6	1
Surrogate Percent Recovery:	82	

ND-Not Detected. The limit of detection is reported above.

Client: LEVINE-FRICKE
Job No: 17529
Date Analyzed: 10-Jan-91
Analysis: EPA 602 (8020)

Sample: METHOD BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	2	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1
Surrogate Percent Recovery:	78	

ND-Not Detected. The limit of detection is reported above.

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB4-5

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V1
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB4-5

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB4-25

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V2
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB4-25

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB5-10

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V3
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB5-10

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB5-25

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V4
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB5-25

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB6-10

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V5
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB6-10

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB6-25

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V6
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB6-25

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB7-10

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17529V9
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB7-10

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: SB7-30

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/10/91

RUN NUMBER: 17529V10
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: SB7-30
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB15-5

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V51
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB15-5
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB15-20

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V52
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB15-20
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB17-5

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V53
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB17-5
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB17-20

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V54
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB17-20
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB18-5

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V55
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB18-5
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FIRCKE
WCAS JOB #: 17529

SAMPLE: SB18-25

DATE RECEIVED: 01/03/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: 17529V56
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FIRCKE SAMPLE: SB18-25
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: LAB BLANK

DATE RECEIVED: 01/09/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: VBLK630
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 17529

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: LAB BLANK

DATE RECEIVED: 01/09/91
DATE EXTRACTED: 01/09/91
DATE ANALYZED: 01/09/91

RUN NUMBER: VBLK742
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	30.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE FRICKE
WCAS JOB #: 17529

SAMPLE: LAB BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 01/09/91

FILENAME	SAMPLE ID	W/S	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
17529V1	SB4-5	S	128	101	98
17529V2	SB4-25	S	118	103	98
17529V3	SB5-10	S	119	100	98
17529V4	SB5-25	S	116	99	97
17529V5	SB6-10	S	112	97	96
VBLK630	LAB BLANK	S	101	93	93
17529V6	SB6-25	S	102	95	98
17529V9	SB7-10	S	102	91	92
17529V10	SB7-30	S	103	90	93

S - SOIL W - WATER

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

DATE ANALYZED: 01/09/91
INSTRUMENT: 5101

MATRIX: SOIL

SAMPLE #	TOLUENE-D8	BFB	1,2-DICHLORO-ETHANE-D4
SB15-5	101	97	106
SB15-20	98	98	105
SB17-5	100	98	105
SB17-20	101	97	106
SB18-5	98	96	106
SB18-25	99	98	107

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

TR - Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified DL but greater than zero.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: -	Date: 1/3/91	Serial No.: № N- 0564
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB6-2	1/3/91	0912		1	soil							X		
SB6-10		0918		1								X		
SB6a-10		1455		1								X		
SB6-15		0923		1								X		
SB6a-15		1500		1								X		
SB6-20		0927		1								X		
SB6-25		0933		1								X		
SB7-2		1000		1								X		
SB7-10		1005		1								X		
SB7a-10		1430		1								X		
SB7-15		1014		1								X		
SB7a-15		1435		1								X		
SB7-20		1020		1								X		
SB7-25		1024		1								X		
SB7-30		1033		1								X		

RELINQUISHED BY: (Signature) [signature]	DATE 1/3/91	TIME 1730	RECEIVED BY: (Signature) [signature]	DATE 1-3-91	TIME 5:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17529	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Packed on Blue Ice	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0083~~

Analytical Laboratory:
West Coast Analytical

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 1/3/91	Serial No.: Nº N- 0565
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature) :			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB4-5	1/3/91	0740		1	Soil							X		
SB4-10		0745		1								X		
SB4a-10		1545 ~~0750~~		1								X		
SB4-15		0750		1								X		
SB4a-15		1550		1								X		
SB4-20		0755		1								X		
SB4-25		0800		1								X		
SB5-5		0830		1								X		
SB5-10		0830		1								X		
SB5a-10		1516		1								X		
SB5-15		0837		1								X		
SB5a-15		1520		1								X		
SB5-20		0842		1								X		
SB5-25		0846		1								X		

RELINQUISHED BY: (Signature)	DATE 1/3/91	TIME 1730	RECEIVED BY: (Signature)	DATE 1-3-91	TIME 5:31
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17529	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED on BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
WEST COAST ANALYTICAL

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 1/3/91	Serial No.: Nº N- 0567
Project Name: Silk Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB19-5	1/3/91	1245		1	Soil							x		
SB19-10	↓	1249		1	↓							x		
SB19-15		1255		1								x		
SB19-20		1258		1								x		
SB19-25		1304		1								x		
												x		

RELINQUISHED BY: (Signature) [signature]	DATE 1/3/91	TIME 1730	RECEIVED BY: (Signature) [signature]	DATE 1-5-91	TIME 5:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) 17529	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
West Coast Analytical

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2173	Field Logbook No.: –	Date: 1/3/91	Serial No.: № N- 0568
Project Name: Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB15-5	1/3/91	1115		1	Soil							X		
SB15-10	↓	1121		1	↓							X		
SB15-15		1125		1								X		
SB15-20		1130		1								X		
SB15-25		1135		1								X		
SB17-5		1200		1								X		
SB17-10		1205		1								X		
SB17-15		1210		1								X		
SB17-20		1215		1								X		
SB17-27		1223		1								X		
SB18-5		1331		1								X		
SB18-10		1340		1								X		
SB18-15		1345		1								X		
SB18-20		1350		1								X		
SB18-25	↓	1357		1	↓							X		

RELINQUISHED BY: (Signature) [signature]	DATE 1/3/91	TIME 1730	RECEIVED BY: (Signature) [signature]	DATE 1-3-91	TIME 5:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) № 07529	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED IN BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

~~LEVINE-FRICKE~~
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
~~(714) 955-1390 FAX (714) 955-0683~~

Analytical Laboratory:
WESTERN ANALYTICAL

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2193

January 18, 1991

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 17559 A

LABORATORY REPORT

Samples Received: Forty-nine (49) Soil Samples
Date Received: 1-8-91
Date Released for Analysis: 1-9-91
Purchase Order No: Proj#: 2193/Mobil-Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Nineteen (19) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Nineteen (19) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Eleven (11) soils	CAM (17) Metals by ICPMS	Data Sheets
Five (5) soils	Volatile Aromatics by EPA 8020	Data Sheets
One (1) soil	Semi-Volatile Organics by EPA 8270	Data Sheets
One (1) soil	Surrogate Percent Recoveries for EPA 8270	Data Sheet

B. Michael Hovanec
Senior Staff Chemist

Michael Shelton
Technical Director

RECEIVED
JAN 22
LEVINE-FRICKE

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 17559
January 18, 1991

LABORATORY REPORT

Samples Analyzed	Analysis	Results
Fourteen (14) soils	Volatile Organics by EPA 8260	Data Sheets
Fourteen (14) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 17559
January 18, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SB1-10	ND
SB1-25	ND
SB3-15	6100
SB3-25	ND
SB8-10	280
SB8-25	ND
SB9-5	ND
SB9-25	ND
SB14-5	ND
SB14-15	ND
SB14-25	ND
SB16-15	ND
SB16-25	ND
SB20-15	ND
SB20-55	ND
SB21-15	ND
SB21-25	ND
SB22-10	ND
SB22-25	ND
Detection Limit	10

ND - Not Detected

Date Analyzed: 1-14-91

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 17559
January 18, 1991

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SB1-10	ND	ND	ND	ND	ND
SB1-25	ND	ND	ND	ND	ND
SB3-25	ND	ND	ND	ND	ND
SB8-10	ND	ND	ND	ND	ND
SB8-25	ND	ND	ND	ND	ND
SB9-5	ND	ND	ND	ND	ND
SB9-25	ND	ND	ND	ND	ND
SB14-5	ND	ND	ND	ND	ND
SB14-15	ND	ND	ND	ND	ND
SB14-25	ND	ND	ND	ND	ND
SB16-15	ND	ND	ND	ND	ND
SB16-25	ND	ND	ND	ND	ND
SB20-15	ND	ND	ND	ND	ND
SB20-55	ND	ND	ND	ND	ND
SB21-15	ND	ND	ND	ND	ND
SB21-25	ND	ND	ND	ND	ND
SB22-10	ND	ND	ND	ND	ND
SB22-25	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

Sample ID	C_5-C_{30} Total Hydrocarbons
SB3-15	8400
Detection Limit	100

ND - Not Detected

Date Analyzed: 1-17-91

Client: Levine-Fricke Sample: SB1-10
Job Number: 17559
Date Analyzed: 01-15-91 File: 7559
111

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.9	0.2	150	500
Arsenic	8	0.6	50	500
Barium	161	0.2	1000	10000
Beryllium	0.55	0.02	7.5	75
Cadmium	0.03	0.02	10	100
Chromium (III/VI)	32.9	0.7	5600/50	2500/500
Cobalt	10.5	0.02	800	8000
Copper	27.5	0.09	250	2500
Lead	8.01	0.04	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.2	0.05	3500	3500
Nickel	23.8	0.2	200	2000
Selenium	ND<0.3	0.3	10	100
Silver	0.04	0.02	50	500
Thallium	0.18	0.02	70	700
Vanadium	54	2	240	2400
Zinc	63	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

2193.

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

July 31, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19032

RECEIVED

A

LABORATORY

#4

SEND

Samples Received: Twenty-five (2!
Date Received: 7-17-91
Date Released for Analysis: 7-1
Purchase Order No: Proj#: 2193/M

The samples were analyzed as fol

Samples Analyzed	Analysis	
Twelve (12) soils	CAM (17)	eets
One (1) soil	QC Summar	eets

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

2193.

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

July 31, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19032

RECEIVED
LEVINE-FRICKE

A

LABORATORY REPORT

Samples Received: Twenty-five (25) Soil Samples
Date Received: 7-17-91
Date Released for Analysis: 7-19-91
Purchase Order No: Proj#: 2193/Mobil-Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Twelve (12) soils	CAM (17) Metals by ICPMS	Data Sheets
One (1) soil	QC Summary for ICPMS	Data Sheets

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

Client: Levine-Fricke Sample: RB-3-8
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 131

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1	0.3	150	500
Arsenic	11	2	50	500
Barium	190	0.07	1000	10000
Beryllium	0.98	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	38.7	0.5	5600/50	2500/500
Cobalt	18.9	0.02	800	8000
Copper	35.2	0.05	250	2500
Lead	10.4	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.53	0.05	3500	3500
Nickel	28.7	0.1	200	2000
Selenium	ND<3	3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	63	4	240	2400
Zinc	64.4	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-4-3
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032
141

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.5	0.3	150	500
Arsenic	3	3	50	500
Barium	105	0.07	1000	10000
Beryllium	0.45	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	22.7	0.5	5600/50	2500/500
Cobalt	7.62	0.02	800	8000
Copper	13.6	0.05	250	2500
Lead	5.02	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.35	0.05	3500	3500
Nickel	17.2	0.1	200	2000
Selenium	ND<3	3	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	41	4	240	2400
Zinc	44.8	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-4-8
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 151

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1	0.3	150	500
Arsenic	11	2	50	500
Barium	147	0.07	1000	10000
Beryllium	0.62	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	38.8	0.5	5600/50	2500/500
Cobalt	14.5	0.02	800	8000
Copper	33.7	0.05	250	2500
Lead	10.1	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.26	0.05	3500	3500
Nickel	23.8	0.2	200	2000
Selenium	ND<3	3	10	100
Silver	0.03	0.02	50	500
Thallium	0.18	0.02	70	700
Vanadium	55	4	240	2400
Zinc	57.8	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke
Job Number: 19032
Date Analyzed: 07-25-91

Sample: RB-6-3

File: 9032 161

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.3	0.3	150	500
Arsenic	3	3	50	500
Barium	103	0.07	1000	10000
Beryllium	0.5	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	20.5	0.5	5600/50	2500/500
Cobalt	7.05	0.02	800	8000
Copper	15.1	0.05	250	2500
Lead	4.47	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.21	0.05	3500	3500
Nickel	15.6	0.1	200	2000
Selenium	ND<3	3	10	100
Silver	0.04	0.02	50	500
Thallium	0.1	0.02	70	700
Vanadium	36	5	240	2400
Zinc	45.5	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-9-3
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 291

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	5.9	0.4	150	500
Arsenic	16	2	50	500
Barium	332	0.06	1000	10000
Beryllium	0.42	0.08	7.5	75
Cadmium	0.66	0.1	10	100
Chromium (III/VI)	61.8 *	0.5	5600/50	2500/500
Cobalt	12.4	0.02	800	8000
Copper	160	0.05	250	2500
Lead	180 *	0.04	50	1000
Mercury	0.9	0.2	2	20
Molybdenum	2.53	0.05	3500	3500
Nickel	42	0.2	200	2000
Selenium	4	3	10	100
Silver	0.13	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	44	4	240	2400
Zinc	2300	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-12-8
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032
181

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.7	0.4	150	500
Arsenic	4	2	50	500
Barium	97.4	0.06	1000	10000
Beryllium	0.45	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	24.4	0.5	5600/50	2500/500
Cobalt	8.11	0.02	800	8000
Copper	18.5	0.05	250	2500
Lead	5.06	0.04	50	1000
Mercury	ND<0.2	0.2	2	20
Molybdenum	0.47	0.05	3500	3500
Nickel	16.8	0.1	200	2000
Selenium	ND<3	3	10	100
Silver	0.06	0.02	50	500
Thallium	0.09	0.02	70	700
Vanadium	39	5	240	2400
Zinc	50.5	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-23-10
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 171

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.4	0.3	150	500
Arsenic	5	2	50	500
Barium	104	0.07	1000	10000
Beryllium	0.44	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	20.3	0.5	5600/50	2500/500
Cobalt	7.23	0.02	800	8000
Copper	15.6	0.05	250	2500
Lead	6.97	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.85	0.05	3500	3500
Nickel	15	0.1	200	2000
Selenium	ND<3	3	10	100
Silver	0.02	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	38	5	240	2400
Zinc	44.6	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-23-25
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 241

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.5	0.3	150	500
Arsenic	11	3	50	500
Barium	138	0.07	1000	10000
Beryllium	0.72	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	39.5	0.5	5600/50	2500/500
Cobalt	10.4	0.02	800	8000
Copper	27.6	0.05	250	2500
Lead	5.69	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.32	0.05	3500	3500
Nickel	21.9	0.3	200	2000
Selenium	ND<3	3	10	100
Silver	0.06	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	57	5	240	2400
Zinc	66.8	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-24-15
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 251

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1	0.3	150	500
Arsenic	5	3	50	500
Barium	128	0.07	1000	10000
Beryllium	0.49	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	29	0.5	5600/50	2500/500
Cobalt	8.51	0.02	800	8000
Copper	21.7	0.05	250	2500
Lead	15.6	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	1.67	0.05	3500	3500
Nickel	18.2	0.2	200	2000
Selenium	ND<3	3	10	100
Silver	0.05	0.02	50	500
Thallium	0.2	0.02	70	700
Vanadium	42	5	240	2400
Zinc	84.2	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-24-25
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 261

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.7	0.3	150	500
Arsenic	7	3	50	500
Barium	160	0.07	1000	10000
Beryllium	0.52	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	32.1	0.5	5600/50	2500/500
Cobalt	11	0.02	800	8000
Copper	26.5	0.05	250	2500
Lead	5.61	0.03	50	1000
Mercury	ND<0.10	0.1	2	20
Molybdenum	0.34	0.05	3500	3500
Nickel	20.5	0.3	200	2000
Selenium	ND<3	3	10	100
Silver	0.05	0.02	50	500
Thallium	0.17	0.02	70	700
Vanadium	48	6	240	2400
Zinc	66.3	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-25-5
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 271

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.6	0.4	150	500
Arsenic	4	3	50	500
Barium	86	0.06	1000	10000
Beryllium	0.4	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	19.9	0.5	5600/50	2500/500
Cobalt	7.56	0.02	800	8000
Copper	15.6	0.05	250	2500
Lead	4.3	0.04	50	1000
Mercury	ND<0.2	0.2	2	20
Molybdenum	0.35	0.05	3500	3500
Nickel	13.8	0.2	200	2000
Selenium	ND<3	3	10	100
Silver	0.03	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	38	7	240	2400
Zinc	40.3	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: SB-25-15
Job Number: 19032
Date Analyzed: 07-25-91 File: 9032 281

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	ND<0.4	0.4	150	500
Arsenic	ND<2	2	50	500
Barium	90.2	0.06	1000	10000
Beryllium	0.23	0.08	7.5	75
Cadmium	ND<0.10	0.1	10	100
Chromium (III/VI)	21.3	0.5	5600/50	2500/500
Cobalt	6.76	0.02	800	8000
Copper	16.6	0.05	250	2500
Lead	3.58	0.04	50	1000
Mercury	ND<0.2	0.2	2	20
Molybdenum	0.14	0.05	3500	3500
Nickel	15.1	0.2	200	2000
Selenium	ND<3	3	10	100
Silver	0.04	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	30	5	240	2400
Zinc	49.3	0.3	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-12-8
Job Number: 19032
Date Analyzed: 07-25-91
Matrix: Soil

C.A.M Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million (mg/Kg)

	Sample	Duplicate			Spk Rslt		
	9032 181	9032 191	RPD %	Spike Conc ppm	9032 201	% Recovery	Detect. Limit
Beryllium	0.45	0.46		20	22	107.7	0.08
Vanadium	39	37		20	60		6
Chromium	24.4	23.3	4.6	20	44.7		0.5
Cobalt	8.11	7.71	5.1	20	28.8	104.5	0.02
Nickel	16.8	15.5	8	20	36.7	102.8	0.1
Copper	18.5	17.8	3.9	20	37.8	98.3	0.05
Zinc	50.5	47.7	5.7	20	70.5		0.3
Arsenic	4	4		20	22	90	3
Selenium	ND<3	ND<3		20	17	85	3
Molybdenum	0.47	0.4		20	20.5	100.3	0.05
Silver	0.06	0.05		20	18.3	91.2	0.02
Cadmium	ND<0.10	ND<0.10		20	20.3	101.5	0.1
Antimony	0.7	0.5		20	16.3	78.5	0.4
Barium	97.4	91.9	5.8	20	115		0.06
Mercury	ND<0.2	ND<0.2		2	2.1	105	0.2
Thallium	0.09	0.12		20	20.7	103	0.02
Lead	5.06	4.86	4	20	27.2	111.2	0.04

Client: Levine-Fricke Sample: RB-12-8
Job Number: 19032
Date Analyzed: 07-25-91
Matrix: Soil

C.A.M Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million (mg/Kg)

	Sample		MS		MSD		
	9032 181	Spike Conc ppm	9032 201	% Recovery	9032 211	% Recovery	RPD %
Beryllium	0.45	20	22	107.8	22.3	109.3	1.4
Vanadium	39	20	60		57		5.1
Chromium	24.4	20	44.7		42.8		4.3
Cobalt	8.11	20	28.8	103.5	28.3	101	1.8
Nickel	16.8	20	36.7	99.5	35	91	4.7
Copper	18.5	20	37.8	96.5	37	92.5	2.1
Zinc	50.5	20	70.5		65.4		7.5
Arsenic	4	20	22	90	23	95	4.4
Selenium	ND<3	20	17	85	17	85	0
Molybdenum	0.47	20	20.5	100.2	21.2	103.7	3.4
Silver	0.06	20	18.3	91.2	18.5	92.2	1.1
Cadmium	ND<0.10	20	20.3	101.5	20	100	1.5
Antimony	0.7	20	16.3	78	16.4	78.5	0.6
Barium	97.4	20	115		109		5.4
Mercury	ND<0.2	2	2.1	105	2.2	110	4.7
Thallium	0.09	20	20.7	103.1	20.6	102.6	0.5
Lead	5.06	20	27.2	110.7	26.7	108.2	1.9

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 7/17/91	Serial No.: Nº N- 0872
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		

Sampler (Signature) :

Samplers: SAA

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	CAM				HOLD	RUSH	REMARKS
RB - 3 - 3	7/17/91	1500		1	SOIL							X		
RB - 3 - 8	7/17/91	1510		1	SOIL			X				X		
RB - 4 - 3	7/17/91	1430		1	SOIL			X				X		
RB - 4 - 8	7/17/91	1440		1	SOIL			X				X		
RB - 6 - 3	7/17/91	1600		1	SOIL			X				X		
RB - 6 - 8	7/17/91	1615		1	SOIL							X		
RB - 9 - 3	7/17/91	1630		1	SOIL			X				X		
RB - 9 - 8	7/17/91	1640		1	SOIL							X		
RB - 12 - 3	7/17/91	1530		1	SOIL							X		
RB - 12 - 8	7/17/91	1540		1	SOIL			X				X		
														REVISED ANALYSIS REQUEST
														MADE ON 7/19/91 - SAA
														RESULTS TO: ANTHONY SILVA

RELINQUISHED BY: (Signature)	DATE 7/17/91	TIME 550	RECEIVED BY: (Signature) 19032	DATE 7-17-91	TIME 5:50
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Contact:

LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 7/17/91	Serial No.: Nº N- 1017
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SAD

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	CAM				HOLD	RUSH	REMARKS ANALYSIS SELECTION 7/19/91
SB-23-5	7/17/91	0800		1	Soil							X		— SAD
SB-23-10	7/17/91	0810		1	Soil			X						
SB-23-15	7/17/91	0815		1	Soil							X		
SB-23-20	7/17/91	0830		1	Soil							X		
SB-23-25	7/17/91	0900		1	Soil			X						
SB-24-5	7/17/91	1045		1	Soil							X		
SB-24-10	7/17/91	1100		1	Soil							X		
SB-24-15	7/17/91	1115		1	Soil			X						
SB-24-20	7/17/91	1130		1	Soil							X		
SB-24-25	7/17/91	1145		1	Soil			X						
SB-25-5	7/17/91	0940		1	Soil			X						
SB-25-10	7/17/91	0950		1	Soil							X		
SB-25-15	7/17/91	1015		1	Soil			X						
SB-26-10	7/17/91	1255		1	Soil							X		
SB-26-15	7/17/91	1310		1	Soil							X		
														RESULTS TO: ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 7/17/91	TIME 550	RECEIVED BY: (Signature) [signature] 19032	DATE 7-17-91	TIME 5:50
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 7/17/91	Serial No.: Nº N- 1017
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SFV

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624						HOLD	RUSH	REMARKS
✓ SB-23-5	7/17/91	0800		1	Soil										
✓ SB-23-10	7/17/91	0810		1	Soil										
✓ SB-23-15	7/17/91	0845		1	Soil										
✓ SB-23-20	7/17/91	0830		1	Soil										
✓ SB-23-25	7/17/91	0900		1	Soil										
✓ SB-24-5	7/17/91	1045		1	Soil										
✓ SB-24-10	7/17/91	1100		1	Soil										
✓ SB-24-15	7/17/91	1115		1	Soil										
✓ SB-24-20	7/17/91	1130		1	Soil										
✓ SB 24-25	7/17/91	1145		1	Soil										
✓ SB-25-5	7/17/91	0940		1	Soil										
✓ SB-25-10	7/17/91	0950		1	Soil										
✓ SB-25-15	7/17/91	1015		1	Soil										
✓ SB-26-10	7/17/91	1235		1	Soil										
✓ SB 26 15	7/17/91	1310		1	Soil										
															RESULTS TO: Anthony Silva

RELINQUISHED BY: (Signature) [signature]	DATE 7/17/91	TIME 550	RECEIVED BY: (Signature) [signature]	DATE 7-17-91	TIME 5:50
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1920 Main St. Ste. 250
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 7/17/91	Serial No.: № N- 0872
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature):			Samplers: SRR

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
RB - 3 - 3	7/17/91	1500		1	Soil							X		
RB - 3 - 8	7/17/91	1510		1	Soil							X		
RB - 4 - 3	7/17/91	1430		1	Soil							X		
RB - 4 - 8	7/17/91	1440		1	Soil							X		
RB - 6 - 3	7/17/91	1600		1	Soil							X		
RB - 6 - 8	7/17/91	1615		1	Soil							X		
RB - 9 - 3	7/17/91	1630		1	Soil							X		
RB - 9 - 8	7/17/91	1640		1	Soil							X		
RB - 12 - 3	7/17/91	1530		1	Soil							X		
RB - 12 - 8	7/17/91	1540		1	Soil							X		
														RESULTS TO ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 7/17/91	TIME 550	RECEIVED BY: (Signature) [signature] 19032	DATE 7-17-91	TIME 5:50
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: —	Date: 7/18/91	Serial No.: № N- 0881
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SRA

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
RB-1-3	7/18/91	1035		1	Soil							x		
RB-1-8	7/18/91	1045		1	Soil							x		
RB-2-3	7/18/91	0820		1	Soil							x		
RB-2-8	7/18/91	0830		1	Soil							x		
RB-5-3	7/18/91	0750		1	Soil							x		
RB-5-8	7/18/91	0800		1	Soil							x		
RB-7-3	7/18/91	1130		1	Soil							x		
RB-7-8	7/18/91	1140		1	Soil							x		
RB-8-3	7/18/91	1210		1	Soil							x		
RB-8-8	7/18/91	1220		1	Soil							x		
RB-10-3	7/18/91	1100		1	Soil							x		
RB-10-8	7/18/91	1115		1	Soil							x		
RB-11-3	7/18/91	0845		1	Soil							x		
RB-11-8	7/18/91	1000		1	Soil							x		
					S									
														RESULTS TO: ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 7/18/91	TIME 445	RECEIVED BY: (Signature) [signature] 19041	DATE 7-18-91	TIME 4:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

2193

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

July 31, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19041

RECEIVED AUG - 5 1991 LEVINE-FRICKE

A

LABORATORY REPORT

Samples Received: Twenty-four (24) Soil Samples
Date Received: 7-18-91
Date Released for Analysis: 7-19-91
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Ten (10) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Ten (10) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Seven (7) soils	Volatile Organics by EPA 8260	Data Sheets
Seven (7) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet

Enclosures: 8015 Chromatograms

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 19041
July 31, 1991

LABORATORY REPORT

Samples Analyzed	Analysis	Results
Ten (10) soils	CAM (17) Metals by ICPMS	Data Sheets
Three (3) soils	Aromatic Volatile Organics by EPA 8020	Data Sheets

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 19041
July 31, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SS-4	800
SS-5	420
SS-6	ND
SS-7	2100
SS-8	310
SS-9	30
SS-10	300
SS-11	1400
SS-12	1300
SS-13	140
Detection Limit	10

ND - Not Detected

Date Analyzed: 7-26-91

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE-FRICKE
Mr. Anthony Silva

Job # 19041
July 31, 1991

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SS-4	ND	ND	ND	ND	800
SS-5	ND	ND	ND	ND	220
SS-6	ND	ND	ND	ND	ND
SS-7	ND	1200	ND	ND	3000
SS-8	ND	ND	ND	ND	600
SS-9	ND	ND	ND	ND	ND
SS-10	ND	ND	ND	ND	120
SS-11	220*	ND	ND	ND	4000
SS-12	ND	ND	ND	ND	31000
SS-13	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

* Single-peak component; Identity unknown by Modified EPA 8015.

Date Analyzed: 7-25-91

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-4

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T8
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	5. B	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-4
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-5

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T11
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	5. B	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	8. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-5
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-6

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T12
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	5. B	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-6
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-7

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T13
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	91.	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	36.	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	41.	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	12.	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	960.	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-7
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	C9-C10 ALKYLBENZENES	VOA	900.
2	C7-C11 ALIPHATIC AND ALICYCLIC HYDROCARBONS	VOA	10000.
3	UNIDENTIFED COMPOUNDS	VOA	300.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-8

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/22/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T5
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	5. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-8
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-9

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/22/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T6
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	6.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-9
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: SS-13

DATE RECEIVED: 07/18/91
DATE EXTRACTED: 07/22/91
DATE ANALYZED: 07/23/91

RUN NUMBER: 19041T7
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	1300.	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-13
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: LAB BLANK

DATE RECEIVED: 07/23/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: VBLK860
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-2	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	5.	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19041

SAMPLE: LAB BLANK

DATE RECEIVED: 07/23/91
DATE EXTRACTED: 07/23/91
DATE ANALYZED: 07/23/91

RUN NUMBER: VBLK863
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	6.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	9.	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19041

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 07/22/91

FILENAME	SAMPLE ID	FLAG	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
VBLK860	LAB BLANK	S	99	95	95
19041T5	SS-8	S	101	94	92
19041T6	SS-9	S	97	94	92
19041T7	SS-13	S	98	95	92
DATE ANALYZED: 07/23/91					
VBLK863	LAB BLANK	S	113	92	86
19041T8	SS-4	S	106	93	88
19041T11	SS-5	S	103	93	91
19041T12	SS-6	S	101	95	95
19041T13	SS-7	S	99	111	105

O - OTHER S - SOIL W - WATER

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

B - Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

Client: Levine-Fricke Sample: RB-1-8
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 421

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	32.6	0.1	150	500
Arsenic	9	2	50	500
Barium	2700 *	0.2	1000	10000
Beryllium	0.54	0.07	7.5	75
Cadmium	11.8 *	0.05	10	100
Chromium (III/VI)	52.9 *	0.5	5600/50	2500/500
Cobalt	12.7	0.02	800	8000
Copper	627 *	0.1	250	2500
Lead	1750 ****	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	1.18	0.03	3500	3500
Nickel	32	1	200	2000
Selenium	10	2	10	100
Silver	0.47	0.02	50	500
Thallium	0.06	0.02	70	700
Vanadium	32	1	240	2400
Zinc	10000 ****	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-2-3
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 311

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	2.8	0.1	150	500
Arsenic	4	2	50	500
Barium	135	0.2	1000	10000
Beryllium	0.43	0.07	7.5	75
Cadmium	0.94	0.05	10	100
Chromium (III/VI)	23.6	0.5	5600/50	2500/500
Cobalt	7.39	0.02	800	8000
Copper	30.5	0.1	250	2500
Lead	530 *	0.1	50	1000
Mercury	2.82 *	0.09	2	20
Molybdenum	0.35	0.03	3500	3500
Nickel	15.2	0.2	200	2000
Selenium	3	2	10	100
Silver	0.07	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	39	4	240	2400
Zinc	216	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-2-8
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 391

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	2.6	0.1	150	500
Arsenic	4	2	50	500
Barium	824	0.2	1000	10000
Beryllium	0.69	0.07	7.5	75
Cadmium	1.43	0.05	10	100
Chromium (III/VI)	29.9	0.5	5600/50	2500/500
Cobalt	8.78	0.02	800	8000
Copper	142	0.1	250	2500
Lead	150 *	0.1	50	1000
Mercury	0.2	0.09	2	20
Molybdenum	0.41	0.03	3500	3500
Nickel	29.6	0.3	200	2000
Selenium	ND<2	2	10	100
Silver	0.2	0.02	50	500
Thallium	0.16	0.02	70	700
Vanadium	42	5	240	2400
Zinc	956	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-5-3
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 411

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	5.3	0.1	150	500
Arsenic	19	2	50	500
Barium	610	0.2	1000	10000
Beryllium	0.41	0.07	7.5	75
Cadmium	3.19	0.05	10	100
Chromium (III/VI)	30.9	0.5	5600/50	2500/500
Cobalt	9.36	0.02	800	8000
Copper	112	0.1	250	2500
Lead	450 *	0.1	50	1000
Mercury	3.11 *	0.09	2	20
Molybdenum	1.45	0.03	3500	3500
Nickel	24.2	0.5	200	2000
Selenium	2	2	10	100
Silver	0.2	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	43	5	240	2400
Zinc	1220	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-7-3
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032
361

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.6	0.1	150	500
Arsenic	5	2	50	500
Barium	199	0.2	1000	10000
Beryllium	0.59	0.07	7.5	75
Cadmium	0.09	0.05	10	100
Chromium (III/VI)	24	0.5	5600/50	2500/500
Cobalt	7.79	0.02	800	8000
Copper	21.3	0.1	250	2500
Lead	15.6	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	0.56	0.03	3500	3500
Nickel	17.1	0.1	200	2000
Selenium	ND<2	2	10	100
Silver	0.08	0.02	50	500
Thallium	0.08	0.02	70	700
Vanadium	44	6	240	2400
Zinc	94	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-8-3
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 371

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1	0.1	150	500
Arsenic	5	1	50	500
Barium	109	0.2	1000	10000
Beryllium	0.59	0.07	7.5	75
Cadmium	0.09	0.05	10	100
Chromium (III/VI)	25.9	0.5	5600/50	2500/500
Cobalt	9.22	0.02	800	8000
Copper	17.6	0.1	250	2500
Lead	6.9	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	0.43	0.03	3500	3500
Nickel	17.9	0.1	200	2000
Selenium	ND<2	2	10	100
Silver	0.04	0.02	50	500
Thallium	0.15	0.02	70	700
Vanadium	49	3	240	2400
Zinc	59	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-8-8
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 381

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.2	0.1	150	500
Arsenic	8	2	50	500
Barium	113	0.2	1000	10000
Beryllium	0.64	0.07	7.5	75
Cadmium	ND<0.05	0.05	10	100
Chromium (III/VI)	33.2	0.5	5600/50	2500/500
Cobalt	13	0.02	800	8000
Copper	28.4	0.1	250	2500
Lead	8.2	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	0.19	0.03	3500	3500
Nickel	20.2	0.1	200	2000
Selenium	ND<2	2	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.13	0.02	70	700
Vanadium	56	5	240	2400
Zinc	57	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-10-3
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 321

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	1.2	0.1	150	500
Arsenic	8	2	50	500
Barium	121	0.2	1000	10000
Beryllium	0.41	0.07	7.5	75
Cadmium	0.19	0.05	10	100
Chromium (III/VI)	23.6	0.5	5600/50	2500/500
Cobalt	8.68	0.02	800	8000
Copper	21.5	0.1	250	2500
Lead	27	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	0.56	0.03	3500	3500
Nickel	16.9	0.1	200	2000
Selenium	2	2	10	100
Silver	0.02	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	44	5	240	2400
Zinc	334	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-10-8
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032
331

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	0.9	0.1	150	500
Arsenic	4	1	50	500
Barium	109	0.2	1000	10000
Beryllium	0.28	0.07	7.5	75
Cadmium	0.17	0.05	10	100
Chromium (III/VI)	26.1	0.5	5600/50	2500/500
Cobalt	7.53	0.02	800	8000
Copper	36.7	0.1	250	2500
Lead	31.5	0.1	50	1000
Mercury	ND<0.09	0.09	2	20
Molybdenum	0.78	0.03	3500	3500
Nickel	34.3	0.5	200	2000
Selenium	ND<2	2	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	39	3	240	2400
Zinc	162	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB-11-8
Job Number: 19041
Date Analyzed: 07-25-91 File: 9032 401

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	6.1	0.1	150	500
Arsenic	5	1	50	500
Barium	460	0.2	1000	10000
Beryllium	0.39	0.07	7.5	75
Cadmium	1.55	0.05	10	100
Chromium (III/VI)	32.2	0.5	5600/50	2500/500
Cobalt	7.9	0.02	800	8000
Copper	1500 *	0.1	250	2500
Lead	344 *	0.1	50	1000
Mercury	10.1 *	0.09	2	20
Molybdenum	0.8	0.03	3500	3500
Nickel	16.6	0.4	200	2000
Selenium	3	2	10	100
Silver	0.2	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	35	3	240	2400
Zinc	1000	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: LEVINE-FRICKE
Job No: 19041
Date Analyzed: 24-Jul-91
Analysis: EPA 602 (8020)
Inst. # : GC #5

Sample: LAB BLANK
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 100

ND-Not Detected. The limit of detection is reported above.

B-Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

Client: LEVINE-FRICKE
Job No: 19041
Date Analyzed: 24-Jul-91
Analysis: EPA 602 (8020)
Inst. # : GC #5

Sample: SS-10
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 104

ND-Not Detected. The limit of detection is reported above.

B-Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

Client: LEVINE-FRICKE
Job No: 19041
Date Analyzed: 24-Jul-91
Analysis: EPA 602 (8020)
Inst. # : GC #5

Sample: SS-11
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 86

ND-Not Detected. The limit of detection is reported above.

B-Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

Client: LEVINE-FRICKE
Job No: 19041
Date Analyzed: 24-Jul-91
Analysis: EPA 602 (8020)
Inst. # : GC #5

Sample: SS-12
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Benzene	ND	1
Chlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Ethylbenzene	ND	1
Toluene	ND	1
Total Xylenes	ND	1

Surrogate Percent Recovery: 69

ND-Not Detected. The limit of detection is reported above.

B-Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.:	Date: 7/19/91	Serial No.: № N- 0878
Project Name: MOBIL - JOLK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	418.1	8015-mod	8260	8020	HOLD	RUSH	REMARKS
SS - 4	7/18/91	1420		1	Soil			X	X	X		X		
SS - 5	7/18/91	1430		1	Soil			X	X	X		X		
SS - 6	7/18/91	1440		1	Soil			X	X	X		X		
SS - 7	7/18/91	1450		1	Soil			X	X	X		X		
SS - 8	7/18/91	1500		1	Soil			X	X	X		X		
SS - 9	7/18/91	1510		1	Soil			X	X	X		X		
SS - 10	7/18/91	1330		1	Soil			X	X		X	X		8020 REQUEST 7/24/91 - SAA
SS - 11	7/18/91	0950		1	Soil			X	X		X	X		8020 REQUEST 7/24/91 - SAA
SS - 12	7/18/91	1340		1	Soil			X	X		X	X		8020 REQUEST 7/24/91 - SAA
SS - 13	7/18/91	1350		1	Soil			X	X	X		X		
														RESULTS TO: ANTHONY SILVA
														ANALYSIS REQUEST MADE ON 7/15/91 - SAA

RELINQUISHED BY: (Signature) [signature]	DATE 7/18/91	TIME 4:45	RECEIVED BY: (Signature) [signature] for 19041	DATE 7-18-91	TIME 4:45
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.:	Date: 7/18/91	Serial No.: № N- 0878
Project Name: MOBIL - JOLK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SAA

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	418.1	8015-MOD	8260	8020	HOLD	RUSH	REMARKS
SS - 4	7/18/91	1420		1	Soil			X	X	X		X		
SS - 5	7/18/91	1430		1	Soil			X	X	X		X		
SS - 6	7/18/91	1440		1	Soil			X	X	X		X		
SS - 7	7/18/91	1450		1	Soil			X	X	X		X		
SS - 8	7/18/91	1500		1	Soil			X	X	X		X		
SS - 9	7/18/91	1510		1	Soil			X	X	X		X		
SS - 10	7/18/91	1330		1	Soil			X	X		X	X		8020 REQUEST 7/22/91 - SAA
SS - 11	7/18/91	0950		1	Soil			X	X		X	X		8020 REQUEST 7/22/91 - SAA
SS - 12	7/18/91	1340		1	Soil			X	X		X	X		8020 REQUEST 7/22/91 - SAA
SS - 13	7/18/91	1350		1	Soil			X	X	X		X		
														RESULTS TO: ANTHONY SILVA
														ANALYSIS REQUEST MADE ON 7/15/91 — SAA

RELINQUISHED BY: (Signature) [signature]	DATE 7/18/91	TIME 445	RECEIVED BY: (Signature) [signature] 19041	DATE 7-18-91	TIME 445
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.:	Date: 7/18/91	Serial No.: № N- 0878
Project Name: Mobil - Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SS - 4	7/18/91	1420		1	Soil							X		
SS - 5	7/18/91	1430		1	Soil							X		
SS - 6	7/18/91	1440		1	Soil							X		
SS - 7	7/18/91	1450		1	Soil							X		
SS - 8	7/18/91	1500		1	Soil							X		
SS - 9	7/18/91	1510		1	Soil							X		
SS - 10	7/18/91	1330		1	Soil							X		
SS - 11	7/18/91	0950		1	Soil							X		
SS - 12	7/18/91	1340		1	Soil							X		
SS - 13	7/18/91	1350		1	Soil							X		
														Results to [illegible]

RELINQUISHED BY: (Signature) [signature]	DATE 7/18/91	TIME 445	RECEIVED BY: (Signature) [signature] 19041	DATE 7-18-91	TIME 445
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Packed on ice	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: West Coast Analytical

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARE

2193

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

August 5, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19049

RECEIVED LEVINE-FRICKE

A

LABORATORY REPORT

Samples Received: Eight (8) soils
Date Received: 7-19-91
Purchase Order No: Proj#: 2193/Mobil - Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Eight (8) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table 1
Eight (8) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 2
Eight (8) soils	Volatile Organics by EPA 8260	Data Sheets
Eight (8) soils	Surrogate Percent Recoveries for EPA 8260	Data Sheet

Enclosures: 8015 Chromatograms

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 19049
August 5, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Sample No.	Total Petroleum Hydrocarbons by EPA 418.1
SS-1	2000
SS-2	1100
SS-3	15000
T9A-1a	3600
T9A-1b	29
T9B-1	ND
T9A-2	ND
T9A-3	ND
Detection Limit	10

ND - Not Detected
Date Analyzed: 7-26-91

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 19049
August 5, 1991

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample ID	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	C_{10}-C_{20} Diesel Fuel	C_{20}-C_{30} Heavy Hydrocarbons
SS-1	ND	ND	ND	520	200
SS-2	ND	ND	ND	ND	280
SS-3	ND	ND	ND	9500*	3900
T9A-1a	4300	ND	ND	890	340
T9A-1b	ND	ND	ND	ND	ND
T9B-1	ND	ND	ND	ND	ND
T9A-2	ND	ND	ND	ND	ND
T9A-3	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

ND - Not Detected

*-Identity Uncertain; Possibly Weathered Diesel Fuel.
Date Analyzed: 7-24-91

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: SS-1

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/31/91
DATE ANALYZED: 07/31/91

RUN NUMBER: 19049T17
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	9.	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	8. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	37.	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-1
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: SS-2

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/24/91
DATE ANALYZED: 07/24/91

RUN NUMBER: 19049T6
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	8. B	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	14. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-2
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: SS-3

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/26/91
DATE ANALYZED: 07/26/91

RUN NUMBER: 19049T12
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	15.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	8. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: SS-3
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: T9A-2

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/30/91
DATE ANALYZED: 07/30/91

RUN NUMBER: 19049T16
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: T9A-2
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: T9A-3

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/26/91
DATE ANALYZED: 07/26/91

RUN NUMBER: 19049T13
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	17.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	24. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: T9A-3
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	C10-C12 ALIPHATIC AND ALICYCLIC HYDROCARBONS	VOA	400.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: T9A-1a

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/24/91
DATE ANALYZED: 07/24/91

RUN NUMBER: 19049T1
SAMPLE AMOUNT: 10G:10ML,5UL
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	5000.
71-43-2	BENZENE	9300.	1000.
75-27-4	BROMODICHLOROMETHANE	ND	1000.
75-25-2	BROMOFORM	ND	1000.
74-83-9	BROMOMETHANE	ND	5000.
78-93-3	2-BUTANONE (MEK)	ND	5000.
75-15-0	CARBON DISULFIDE	5500. B	1000.
56-23-5	CARBON TETRACHLORIDE	ND	1000.
108-90-7	CHLOROBENZENE	ND	1000.
75-00-3	CHLOROETHANE	ND	5000.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	10000.
67-66-3	CHLOROFORM	ND	1000.
74-87-3	CHLOROMETHANE	ND	5000.
108-41-8	CHLOROTOLUENE	ND	1000.
124-48-1	DIBROMOCHLOROMETHANE	ND	1000.
95-50-1	1,2-DICHLOROBENZENE	ND	1000.
541-73-1	1,3-DICHLOROBENZENE	ND	1000.
106-46-7	1,4-DICHLOROBENZENE	ND	1000.
75-34-3	1,1-DICHLOROETHANE	ND	1000.
107-06-2	1,2-DICHLOROETHANE	ND	1000.
75-35-4	1,1-DICHLOROETHYLENE	ND	1000.
156-59-4	CIS-1,2-DICHLOROETHYLENE	7900.	1000.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1000.
78-87-5	1,2-DICHLOROPROPANE	ND	1000.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1000.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1000.
100-41-4	ETHYLBENZENE	1500.	1000.
106-93-4	ETHYLENE DIBROMIDE	ND	1000.
76-13-1	FREON-TF	ND	1000.
119-78-6	2-HEXANONE	ND	5000.
75-09-2	METHYLENE CHLORIDE	3600. B	1000.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5000.
100-42-5	STYRENE	ND	1000.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1000.
127-18-4	TETRACHLOROETHYLENE	2500000.	1000.
109-99-9	TETRAHYDROFURAN	ND	5000.
108-88-3	TOLUENE	3500.	1000.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1000.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1000.
79-01-6	TRICHLOROETHYLENE	10000.	1000.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1000.
108-05-4	VINYL ACETATE	ND	5000.
75-01-4	VINYL CHLORIDE	ND	5000.
95-47-6	TOTAL XYLENES	10000.	1000.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: T9A-1a
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	C9-C10 ALKYLBENZENES	VOA	10000.
2	C6-C11 ALIPHATIC AND ALICYCLIC HYDROCARBONS	VOA	200000.

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: T9A-1b

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/24/91
DATE ANALYZED: 07/24/91

RUN NUMBER: 19049T8
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	9. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	320.	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: T9A-1b
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: T9B-1

DATE RECEIVED: 07/19/91
DATE EXTRACTED: 07/26/91
DATE ANALYZED: 07/26/91

RUN NUMBER: 19049T14
SAMPLE AMOUNT: 1.0G
MATRIX: SOIL

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	14.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: T9B-1
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: LAB BLANK

DATE RECEIVED: 07/24/91
DATE EXTRACTED: 07/24/91
DATE ANALYZED: 07/24/91

RUN NUMBER: VBLK864
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	29.	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	9.	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: LAB BLANK

DATE RECEIVED: 07/26/91
DATE EXTRACTED: 07/26/91
DATE ANALYZED: 07/26/91

RUN NUMBER: VBLK867
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	7.	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: LAB BLANK

DATE RECEIVED: 07/30/91
DATE EXTRACTED: 07/30/91
DATE ANALYZED: 07/30/91

RUN NUMBER: VBLK868
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	ND	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19049

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: LAB BLANK

DATE RECEIVED: 07/31/91
DATE EXTRACTED: 07/31/91
DATE ANALYZED: 07/31/91

RUN NUMBER: VBLK870
SAMPLE AMOUNT: BASED ON 1.0G
MATRIX: WATER

VOLATILE ORGANICS (EPA 624/8260)

UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	47.	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	15.	5.
+08-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT: LEVINE-FRICKE
WCAS JOB #: 19049

SAMPLE: LAB BLANK

UNITS: UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

INSTRUMENT : TRIO1
DATE ANALYZED: 07/24/91

FILENAME	SAMPLE ID	FLAG	1,2-DICHLORO-ETHANE-d4	TOLUENE-d8	BFB
VBLK864	LAB BLANK	S	101	95	96
19049T1	T9A-1a	S	103	103	106
19049T6	SS-2	S	99	92	96
19049T8	T9A-1b	S	100	91	96
DATE ANALYZED: 07/26/91					
VBLK867	LAB BLANK	S	104	101	102
19049T12	SS-3	S	105	97	102
19049T13	T9A-3	S	100	96	99
19049T14	T9B-1	S	101	102	104
DATE ANALYZED: 07/30/91					
VBLK868	LAB BLANK	W	87	84	87
19049T16	T9A-2	S	89	85	89
DATE ANALYZED: 07/31/91					
VBLK870	LAB BLANK	W	104	91	93
19049T17	SS-1	S	96	91	93

O - OTHER S - SOIL W - WATER

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

B - Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.:	Field Logbook No.:	Date:	Serial No.: № N- 0871
Project Name:	Project Location:		
Sampler (Signature):			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
[illegible]	[illegible]	[illegible]		1	[illegible]			X	X	X				
[illegible]	[illegible]	[illegible]		1	[illegible]			X	X	X				
[illegible]	[illegible]	[illegible]		1	[illegible]			X	X	X				
[illegible]														
7165	[illegible]	[illegible]		1	[illegible]			X	X	X				
1646	[illegible]	[illegible]		1	[illegible]			X	X	X				
1181	[illegible]	[illegible]		1	[illegible]			X	X	X				
7165	[illegible]	[illegible]		1	[illegible]			X	X	X				
7165	[illegible]	[illegible]		1	[illegible]			X	X	X				

RELINQUISHED BY: (Signature) [illegible]	DATE [illegible]	TIME 2:35	RECEIVED BY: (Signature) C. Mathington	DATE 7-19-91	TIME 2:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) b19049	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: [illegible]	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.:	Field Logbook No.:	Date:	Serial No.: Nº N-
Project Name:	Project Location:		
Sampler (Signature) :			Samplers:

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624						HOLD	RUSH	REMARKS

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) b 19049	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
4019 Westerly Place, Suite 103
Newport Beach, California 92660
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory:

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: –	Date: 7/19/91	Serial No.: Nº N- 0871
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): Scott A Armstrong			Samplers: Sao

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	418.1	8015-MOD	8260		HOLD	RUSH	REMARKS
SS-1	7/19/91	0810		1	Soil			X	X	X				
SS-2	7/19/91	1305		1	Soil			X	X	X				
SS-3	7/19/91	1320		1	Soil			X	X	X				
T9A-1a	7/19/91	1120		1	Soil			X	X	X				
T9A-1b	7/19/91	1130		1	Soil			X	X	X				
T9B-1	7/19/91	1145		1	Soil			X	X	X				
T9A-2	7/19/91	1200		1	Soil			X	X	X				
T9A-3	7/19/91	1230		1	Soil			X	X	X				
														RESULTS TO ANTHONY SILVA

RELINQUISHED BY: (Signature) Scott A Armstrong	DATE 7/19/91	TIME 2:25	RECEIVED BY: (Signature) Oe Matthewson	DATE 7-19-91	TIME 2:30
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) D19049	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE/FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

2193

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

August 27, 1991

RECEIVED AUG 29 1991 LEVINE-FRICKE

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19271 A

LABORATORY REPORT

Samples Received: Ten (10) Soils from Previous WCAS Jobs 19041 and 19032
Date Received: 8-21-91
Purchase Order No: Proj#: 2193/Mobil-Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Six (6) soils	Selected Soluble Metals in WET Leachate Solution by ICPMS	Table 1
Four (4) soils	CAM (17) Metals by ICPMS	Data Sheets

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 19271
August 27, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/L)

Soluble Metals in W.E.T. Leachate
Solution by ICPMS

Sample ID	Copper	Lead	Mercury
RB1-8	1.8	12****	NA
RB2-3	NA	0.54	NA
RB2-8	NA	0.58	NA
RB5-3	NA	11****	ND
RB9-3	NA	0.33	NA
RB11-8	4.0	2.3	ND
Detection Limit	0.005	0.001	0.008
**** Exceeds STLC Limit	25	5	0.2

ND- Not Detected

NA-Not Analyzed

Date Analyzed: 8-23-91

Client: Levine-Fricke Sample: RB1-3
Job Number: 19271
Date Analyzed: 8-23-91 File: 9264
231

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	16	1	150	500
Arsenic	14	2	50	500
Barium	1440 *	0.3	1000	10000
Beryllium	0.57	0.04	7.5	75
Cadmium	5.88	0.04	10	100
Chromium (III/VI)	46.3	0.5	5600/50	2500/500
Cobalt	9.23	0.02	800	8000
Copper	440 *	0.1	250	2500
Lead	1090 ****	0.07	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	1.5	0.1	3500	3500
Nickel	21	2	200	2000
Selenium	1.4	0.6	10	100
Silver	0.38	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	45.2	0.8	240	2400
Zinc	5490 ****	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB5-8
Job Number: 19271
Date Analyzed: 8-23-91 File: 9264
241

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	9	1	150	500
Arsenic	89 *	2	50	500
Barium	585	0.3	1000	10000
Beryllium	0.51	0.04	7.5	75
Cadmium	3.32	0.04	10	100
Chromium (III/VI)	89.8 *	0.5	5600/50	2500/500
Cobalt	11.1	0.02	800	8000
Copper	71.5	0.1	250	2500
Lead	692 *	0.07	50	1000
Mercury	34.1 ****	0.08	2	20
Molybdenum	1	0.1	3500	3500
Nickel	58.4	0.4	200	2000
Selenium	3.5	0.6	10	100
Silver	0.17	0.02	50	500
Thallium	0.14	0.02	70	700
Vanadium	42	3	240	2400
Zinc	1720	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB9-8
Job Number: 19271
Date Analyzed: 8-23-91 File: 9264
251

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	10	1	150	500
Arsenic	12	2	50	500
Barium	695	0.3	1000	10000
Beryllium	0.52	0.04	7.5	75
Cadmium	4.3	0.04	10	100
Chromium (III/VI)	57.5 *	0.5	5600/50	2500/500
Cobalt	11.4	0.02	800	8000
Copper	130	0.1	250	2500
Lead	1150 ****	0.07	50	1000
Mercury	2.49 *	0.08	2	20
Molybdenum	2.3	0.1	3500	3500
Nickel	33.7	0.5	200	2000
Selenium	7.4	0.6	10	100
Silver	0.26	0.02	50	500
Thallium	0.11	0.02	70	700
Vanadium	46	2	240	2400
Zinc	1880	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke Sample: RB11-3
Job Number: 19271
Date Analyzed: 8-23-91 File: 9264
261

C.A.M. Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry
Total Metals Concentration---Parts Per Million

**** Exceeds TTLC limits * May exceed STLC limits

	Sample mg/Kg	Detection Limit	10X STLC Limits mg/Kg	TTLC Limits mg/Kg
Antimony	2	1	150	500
Arsenic	4	3	50	500
Barium	99.2	0.3	1000	10000
Beryllium	0.57	0.04	7.5	75
Cadmium	0.09	0.04	10	100
Chromium (III/VI)	22.9	0.5	5600/50	2500/500
Cobalt	7.9	0.02	800	8000
Copper	17.1	0.1	250	2500
Lead	10.3	0.07	50	1000
Mercury	ND<0.08	0.08	2	20
Molybdenum	0.3	0.1	3500	3500
Nickel	15.3	0.2	200	2000
Selenium	ND<0.6	0.6	10	100
Silver	ND<0.02	0.02	50	500
Thallium	0.12	0.02	70	700
Vanadium	41	5	240	2400
Zinc	58	1	2500	5000

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium in sample.
(3) 10X STLC Limits used as comparison takes into account dilution of the sample by 1/10 during leachate preparation.

Client: Levine-Fricke
Job Number: 19271
Date Analyzed: 08-22-91

Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million

	Sample 9239 361	Spike Conc ppm	MS 9239 381	% Recovery	MSD 9239 391	% Recovery	RPD %
Beryllium	ND<0.4	35.5	38.3	107.9	38.8	109.3	1.3
Vanadium	33	35.5	73	112.7	74	115.5	1.4
Chromium	17.6	35.5	55.3	106.2	55.6	107	0.5
Cobalt	4.52	35.5	41.1	103	41	102.8	0.2
Nickel	9.7	35.5	46.9	104.8	45.7	101.4	2.6
Copper	5.7	35.5	42.8	104.5	41.5	100.8	3.1
Zinc	39	35.5	78		80		2.5
Arsenic	4	35.5	43	109.9	48	123.9	11
Selenium	ND<2	35.5	34	95.8	39	109.9	13.7
Molybdenum	0.5	35.5	36.9	102.5	38.7	107.6	4.8
Silver	ND<0.04	35.5	33.8	95.2	33.8	95.2	0
Cadmium	0.3	35.5	37.4	104.5	37.1	103.7	0.8
Antimony	ND<0.4	35.5	39.7	111.8	40.5	114.1	2
Barium	126	35.5	172		193		11.5
Mercury	ND<0.3	3.55	3.8	107	3.8	107	0
Thallium	0.13	35.5	33.9	95.1	35.4	99.4	4.3
Lead	5.1	35.5	41.5	102.5	43.2	107.3	4

CHAIN OF CUSTODY RECORD

Client Name: Levine - Fricke
Phone No. 714-955-1390
Fax No. 714-955-0683
Irvine
Proj. No. 2193
Technical Contract: Anthony Silva
Proj. Name Mobil - Jalk Fee

WEST COAST ANALYTICAL SERVICE, Inc.
9840 Alburtis Avenue
Santa Fe Springs, CA 90670
Phone: 213/948-2225 FAX: 213/948-5850

JOB NO. b19271

Sample No.	Sample Description/Remarks	Analyses Requested: Wet	Pb	Hg	Copper		Cam						
RB 3-3	Soil tube prev # 19041	✓	✓										
RB 5-3		✓	✓	✓									
RB 1-8		✓	✓		✓								
RB 3-8		✓	✓										
RB 11-8		✓	✓	✓	✓								
RB 1-3							✓						
RB 11-3							✓						
RB 5-8							✓						
RB 9-3	Soil tube prev # 19032	✓	✓										
RB 9-8	" "						✓						

Date Sampled 7-17, 7-18 **Conditions of Samples**

RUSH TAT

Total No. of Containers . . . 10

Relinquished by: (Company & Signature)	Received for Lab by:	Date / Time
Mary Mulcahey	Mary Mulcahey b19271	8-21 / 9:30 A.M.

White Copy: Job Envelope Yellow Copy: Return with Lab Results Pink Copy: Client at time of sample delivery

8 Soils prev # 19041 & 2 soils prev # 19032

2193

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

September 30, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19573 A

LABORATORY REPORT

Samples Received: Four (4) Soils from Previous WCAS Job No. 19508
Date Received: 9-23-91
Purchase Order No: Proj#: 2193/Mobil-Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Four (4) soils	Soluble Metals in W.E.T. Leachate Solution by ICPMS	Data Sheets

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OCT - 2 1991
LEVINE-FRICKE

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

Client: Levine-Fricke Sample: RB-1-3
Job Number: 19573
Date Analyzed: 09-27-91 File: 9542
291

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Leachate Metals Concentration---Parts Per Million (mg/L)

	Sample mg/L	Detection Limit	CAM STLC Limits
Lead	10.9 ****	0.01	5

(1) **** Exceeds STLC limits

Client: Levine-Fricke Sample: RB-1-8
Job Number: 19573
Date Analyzed: 09-27-91 File: 9542
261

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Leachate Metals Concentration---Parts Per Million (mg/L)

		Sample mg/L	Detection Limit	CAM STLC Limits
Chromium	(III/VI)	0.3	0.1	560/5
Zinc		474 ****	0.09	250

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium leached from sample.
(3) **** Exceeds STLC limits

Client: Levine-Fricke Sample: RB-5-8
Job Number: 19573
Date Analyzed: 09-27-91 File: 9542
281

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Leachate Metals Concentration---Parts Per Million (mg/L)

		Sample mg/L	Detection Limit	CAM STLC Limits
Chromium	(III/VI)	0.4	0.1	560/5
Lead		151 ****	0.01	5

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium leached from sample.
(3) **** Exceeds STLC limits

Client: Levine-Fricke Sample: RB-9-8
Job Number: 19573
Date Analyzed: 09-27-91 File: 9542
271

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Leachate Metals Concentration---Parts Per Million (mg/L)

		Sample mg/L	Detection Limit	CAM STLC Limits
Chromium	(III/VI)	0.6	0.1	560/5
Lead		44.4 ****	0.01	5

(1) ND-Not Detected. The Limit of Detection is reported above.
(2) Chromium reported above as total chromium leached from sample.
(3) **** Exceeds STLC limits

Client: Levine-Fricke
Job Number: 19573
Date Analyzed: 09-27-91
Matrix: W.E.T. Leachate

Selected Metals
Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million (mg/L)

	Sample		MS		MSD		
	9542 291	Spike Conc ppm	9542 301	% Recovery	9542 311	% Recovery	RPD %
Chromium	0.2	10	10.8	106	10.7	105	0.9
Zinc	170	10	178		181		1.7
Lead	10.9	10	19.7		20.4		3.5

CHAIN OF CUSTODY RECORD

Client Name: Levine Fricke

Phone No. 714-955-1540

Fax No. 714-955-0683

Proj. No. 2193

Technical Contract: Anthony Silva

Proj. Name Mobil Jack Fee

WEST COAST ANALYTICAL SERVICE, Inc.
9840 Alburtis Avenue
Santa Fe Springs, CA 90670
Phone: 213/948-2225 FAX: 213/948-5850

JOB NO. t 19573

Sample No.	Sample Description/Remarks	Analyses Requested: Pb	Cr, Zn	Pb, Cr
RB-1-3	Soil Inv # 19508	✓		
RB-1-5	" "		✓	
RB-5-5	" "			✓
RB-9.5	" "			✓

Date Sampled 7-17/18-91

Conditions of Samples

Total No. of Containers . . . 4

Relinquished by: (Company & Signature)	Received for Lab by:	Date / Time
Mary Mulcahey	Mary Mulcahey	9-23-91 / 2:35 p.m.

White Copy: Job Envelope Yellow Copy: Return with Lab Results Pink Copy: Client at time of sample delivery

4 Soils previous # 19508

3

CHAIN OF CUSTODY RECORD

Client Name: [illegible] Phone No. [illegible]

Fax No. [illegible]

Proj. No. 2193

Technical Contract: [illegible] Proj. Name [illegible]

WEST COAST ANALYTICAL SERVICE, Inc.
9840 Alburtis Avenue
Santa Fe Springs, CA 90670
Phone: 213/948-2225 FAX: 213/948-5850

JOB NO. 19573

Sample No.	Sample Description/Remarks	Analyses Requested: Pb	Cr, Zn	Pb, Cr
[illegible]	[illegible] PROJ # 19508	✓		
[illegible]	" "		✓	
[illegible]	" "			✓
[illegible]	" "			✓

Date Sampled [illegible]-91 **Conditions of Samples**

Total No. of Containers . . . 4

Relinquished by: (Company & Signature)	Received for Lab by:	Date / Time
[illegible]	[illegible]	[illegible]

White Copy: Job Envelope Yellow Copy: Return with Lab Results Pink Copy: Client at time of sample delivery

[illegible] # 19508

2193

WCAS

WEST COAST ANALYTICAL SERVICE, INC.

ANALYTICAL CHEMISTS

October 7, 1991

LEVINE-FRICKE
1920 Main Street
Suite 750
Irvine, CA 92714

Attn: Anthony Silva

JOB NO. 19631 A

LABORATORY REPORT

Samples Received: Nine (9) Soils
Date Received: 9-30-91
Purchase Order No: Proj#: 2193/Mobil-Jalk Fee

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
Two (2) soils	Fuel Hydrocarbons by Modified EPA 8015 (LUFT Manual, April 1989)	Table 1
Three (3) soils	Soluble Mercury in W.E.T. Leachate Solution by ICPMS	Table 2
Two (2) soils	Volatile Organics by EPA 8260	Data Sheets

RECEIVED
OCT - 8 1991
LEVINE-FRICKE

Michael Shelton
Technical Director

D. J. Northington, Ph.D.
President

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 19631
October 7, 1991

LABORATORY REPORT

TABLE 1

Parts Per Million (mg/Kg)

Fuel Hydrocarbons by Modified EPA 8015
(LUFT Manual, April 1989)

Sample No.	C_5-C_{10} Gasoline	C_7-C_{12} Mineral Spirits	C_7-C_{15} Kerosene	$C_{10}-C_{20}$ Diesel Fuel	$C_{20}-C_{30}$ Heavy Hydrocarbons
SB-27-30	ND	ND	ND	ND	ND
Detection Limit	10	10	10	10	100

Sample No.	C_5-C_{30} Total Hydrocarbons
SB-27-15	29,000
Detection Limit	100

Mixture of components.

ND - Not Detected

Date Analyzed: 10-1-91

WEST COAST ANALYTICAL SERVICE, INC.

LEVINE FRICKE
Mr. Anthony Silva

Job # 19631
October 7, 1991

LABORATORY REPORT

TABLE 2

Parts Per Million (mg/L)

Soluble Metals in W.E.T. Leachate
Solution by ICPMS

Sample ID	Mercury
RB-2a-3	ND
RB-5a-8	ND
RB-9a-8	ND
Detection Limit	0.03
STLC Limit	0.2

ND-Not Detected

Date Analyzed: 10-4-91

Q.A. FORM FOR 8015 (Petroleum Hydrocarbons) - MSD

Client: LEVINE-FRICKE
Job No.: 19631
Date: 10/01/91

Matrix: SOIL
Group: GC
Analysis Code: 8015

Analytes	Sample SB-27-30	Matrix Spike	Percent Recovery	Matrix Spike Dup	Percent Recovery	Spike R.P.D.	Spike Conc.
Gasoline	ND	613	81	618	82	0.8	758
Diesel	ND	549	82	470	70	15.5**	669

Limits	% Recovery		RPD	
Analyte	Warning	Control	Warning	Control
Gasoline	71-131	56-146	11	17
Diesel	63-131	46-148	13	20

** - outside warning limits

ALL CONCENTRATIONS IN PPM

Client: Levine-Fricke
Job Number: 19631
Date Analyzed: 10-491
Matrix: Water

Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million

	Sample	Duplicate	RPD %	Spike Conc ppm	Spk Rslt	% Recovery	Detect. Limit
Mercury	ND<0.0003	ND<0.0003		0.01	0.095	95	0.0003

CLIENT: LEVINE-FRICKE SAMPLE: SB-27-15
WCAS JOB #: 19631

VOLATILE ORGANICS (EPA 624/8260)

DATE RECEIVED: 09/30/91 MATRIX: SOIL
DATE EXTRACTED: 10/01/91 SAMPLE AMOUNT: 10G:10ML,5UL
DATE ANALYZED: 10/01/91 RUN NUMBER: 19631T1
INSTRUMENT ID: TRI01 UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION		DET LIMIT
67-64-1	ACETONE	ND		5000.
71-43-2	BENZENE	2000.		1000.
75-27-4	BROMODICHLOROMETHANE	ND		1000.
75-25-2	BROMOFORM	ND		1000.
74-83-9	BROMOMETHANE	ND		5000.
78-93-3	2-BUTANONE (MEK)	ND		5000.
75-15-0	CARBON DISULFIDE	ND		1000.
56-23-5	CARBON TETRACHLORIDE	ND		1000.
108-90-7	CHLOROBENZENE	ND		1000.
75-00-3	CHLOROETHANE	ND		5000.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND		10000.
67-66-3	CHLOROFORM	ND		1000.
74-87-3	CHLOROMETHANE	ND		5000.
108-41-8	CHLOROTOLUENE	ND		1000.
124-48-1	DIBROMOCHLOROMETHANE	ND		1000.
95-50-1	1,2-DICHLOROBENZENE	ND		1000.
541-73-1	1,3-DICHLOROBENZENE	ND		1000.
106-46-7	1,4-DICHLOROBENZENE	ND		1000.
75-34-3	1,1-DICHLOROETHANE	ND		1000.
107-06-2	1,2-DICHLOROETHANE	ND		1000.
75-35-4	1,1-DICHLOROETHYLENE	ND		1000.
156-59-4	CIS-1,2-DICHLOROETHYLENE	53000.		1000.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND		1000.
78-87-5	1,2-DICHLOROPROPANE	ND		1000.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND		1000.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND		1000.
100-41-4	ETHYLBENZENE	ND		1000.
106-93-4	ETHYLENE DIBROMIDE	ND		1000.
76-13-1	FREON-TF	ND		1000.
119-78-6	2-HEXANONE	ND		5000.
75-09-2	METHYLENE CHLORIDE	2000.	B	1000.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND		5000.
100-42-5	STYRENE	ND		1000.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND		1000.
127-18-4	TETRACHLOROETHYLENE	ND		1000.
109-99-9	TETRAHYDROFURAN	ND		5000.
108-88-3	TOLUENE	ND		1000.
71-55-6	1,1,1-TRICHLOROETHANE	ND		1000.
79-00-5	1,1,2-TRICHLOROETHANE	ND		1000.
79-01-6	TRICHLOROETHYLENE	ND		1000.
75-69-4	TRICHLOROFLUOROMETHANE	ND		1000.
108-05-4	VINYL ACETATE	ND		5000.
75-01-4	VINYL CHLORIDE	ND		5000.
95-47-6	TOTAL XYLENES	ND		1000.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	106	100	111
CONTROL LIMITS	76-114	88-110	86-115

WCAS

CLIENT: LEVINE-FRICKE SAMPLE: SB-27-15
WCAS JOB #: 19631

TENTATIVELY IDENTIFIED COMPOUNDS

DATE RECEIVED:	09/30/91	MATRIX:	SOIL
DATE EXTRACTED:	10/01/91	SAMPLE AMOUNT:	10G:10ML,5UL
DATE ANALYZED:	10/01/91	RUN NUMBER:	19631T1
INSTRUMENT ID:	TRIO1	UNITS:	UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NAPHTHALENE	VOA	5000.
2	METHYLNAPHTHALENES	VOA	8000.
3	DIMETHYLNAPHTHALENES	VOA	6000.
4	C9-C11 ALKYLBENZENES	VOA	300000.
5	C5-C12 ALIPHATIC AND ALICYCLIC HYDROCARBONS	VOA	1000000.

CLIENT: LEVINE-FRICKE SAMPLE: SB-27-30
WCAS JOB #: 19631

VOLATILE ORGANICS (EPA 624/8260)

DATE RECEIVED: 09/30/91 MATRIX: SOIL
DATE EXTRACTED: 10/02/91 SAMPLE AMOUNT: 1.0G
DATE ANALYZED: 10/02/91 RUN NUMBER: 19631T5
INSTRUMENT ID: TRIO1 UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	20.	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	30. B	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	97	93	92
CONTROL LIMITS	76-114	88-110	86-115

WCAS

CLIENT: LEVINE-FRICKE SAMPLE: SB-27-30
WCAS JOB #: 19631

TENTATIVELY IDENTIFIED COMPOUNDS

DATE RECEIVED:	09/30/91	MATRIX:	SOIL
DATE EXTRACTED:	10/02/91	SAMPLE AMOUNT:	1.0G
DATE ANALYZED:	10/02/91	RUN NUMBER:	19631T5
INSTRUMENT ID:	TRIO1	UNITS:	UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19631

VOLATILE ORGANICS (EPA 624/8260)

DATE RECEIVED: 10/01/91 MATRIX: SOIL
DATE EXTRACTED: 10/01/91 SAMPLE AMOUNT: 10G:10ML,5UL
DATE ANALYZED: 10/01/91 RUN NUMBER: VBLK937
INSTRUMENT ID: TRIO1 UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	5000.
71-43-2	BENZENE	ND	1000.
75-27-4	BROMODICHLOROMETHANE	ND	1000.
75-25-2	BROMOFORM	ND	1000.
74-83-9	BROMOMETHANE	ND	5000.
78-93-3	2-BUTANONE (MEK)	ND	5000.
75-15-0	CARBON DISULFIDE	ND	1000.
56-23-5	CARBON TETRACHLORIDE	ND	1000.
108-90-7	CHLOROBENZENE	ND	1000.
75-00-3	CHLOROETHANE	ND	5000.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	10000.
67-66-3	CHLOROFORM	ND	1000.
74-87-3	CHLOROMETHANE	ND	5000.
108-41-8	CHLOROTOLUENE	ND	1000.
124-48-1	DIBROMOCHLOROMETHANE	ND	1000.
95-50-1	1,2-DICHLOROBENZENE	ND	1000.
541-73-1	1,3-DICHLOROBENZENE	ND	1000.
106-46-7	1,4-DICHLOROBENZENE	ND	1000.
75-34-3	1,1-DICHLOROETHANE	ND	1000.
107-06-2	1,2-DICHLOROETHANE	ND	1000.
75-35-4	1,1-DICHLOROETHYLENE	ND	1000.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	1000.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	1000.
78-87-5	1,2-DICHLOROPROPANE	ND	1000.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	1000.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	1000.
100-41-4	ETHYLBENZENE	ND	1000.
106-93-4	ETHYLENE DIBROMIDE	ND	1000.
76-13-1	FREON-TF	ND	1000.
119-78-6	2-HEXANONE	ND	5000.
75-09-2	METHYLENE CHLORIDE	5000.	1000.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	5000.
100-42-5	STYRENE	ND	1000.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	1000.
127-18-4	TETRACHLOROETHYLENE	ND	1000.
109-99-9	TETRAHYDROFURAN	ND	5000.
108-88-3	TOLUENE	ND	1000.
71-55-6	1,1,1-TRICHLOROETHANE	ND	1000.
79-00-5	1,1,2-TRICHLOROETHANE	ND	1000.
79-01-6	TRICHLOROETHYLENE	ND	1000.
75-69-4	TRICHLOROFLUOROMETHANE	ND	1000.
108-05-4	VINYL ACETATE	ND	5000.
75-01-4	VINYL CHLORIDE	ND	5000.
95-47-6	TOTAL XYLENES	ND	1000.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	106	100	97
CONTROL LIMITS	76-114	88-110	86-115

WCAS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19631

TENTATIVELY IDENTIFIED COMPOUNDS

DATE RECEIVED:	10/01/91	MATRIX:	SOIL
DATE EXTRACTED:	10/01/91	SAMPLE AMOUNT:	10G:10ML,5UL
DATE ANALYZED:	10/01/91	RUN NUMBER:	VBLK937
INSTRUMENT ID:	TRIO1	UNITS:	UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19631

VOLATILE ORGANICS (EPA 624/8260)

DATE RECEIVED: 10/02/91 MATRIX: SOIL
DATE EXTRACTED: 10/02/91 SAMPLE AMOUNT: 1.0G
DATE ANALYZED: 10/02/91 RUN NUMBER: VBLK940
INSTRUMENT ID: TRI01 UNITS: UG/KG (PPB)

CAS #	COMPOUND	CONCENTRATION	DET LIMIT
67-64-1	ACETONE	ND	30.
71-43-2	BENZENE	ND	5.
75-27-4	BROMODICHLOROMETHANE	ND	5.
75-25-2	BROMOFORM	ND	5.
74-83-9	BROMOMETHANE	ND	30.
78-93-3	2-BUTANONE (MEK)	ND	30.
75-15-0	CARBON DISULFIDE	ND	5.
56-23-5	CARBON TETRACHLORIDE	ND	5.
108-90-7	CHLOROBENZENE	ND	5.
75-00-3	CHLOROETHANE	ND	30.
110-75-8	2-CHLOROETHYLVINYL ETHER	ND	50.
67-66-3	CHLOROFORM	ND	5.
74-87-3	CHLOROMETHANE	ND	30.
108-41-8	CHLOROTOLUENE	ND	5.
124-48-1	DIBROMOCHLOROMETHANE	ND	5.
95-50-1	1,2-DICHLOROBENZENE	ND	5.
541-73-1	1,3-DICHLOROBENZENE	ND	5.
106-46-7	1,4-DICHLOROBENZENE	ND	5.
75-34-3	1,1-DICHLOROETHANE	ND	5.
107-06-2	1,2-DICHLOROETHANE	ND	5.
75-35-4	1,1-DICHLOROETHYLENE	ND	5.
156-59-4	CIS-1,2-DICHLOROETHYLENE	ND	5.
156-60-5	TRANS-1,2-DICHLOROETHYLENE	ND	5.
78-87-5	1,2-DICHLOROPROPANE	ND	5.
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.
100-41-4	ETHYLBENZENE	ND	5.
106-93-4	ETHYLENE DIBROMIDE	ND	5.
76-13-1	FREON-TF	ND	5.
119-78-6	2-HEXANONE	ND	30.
75-09-2	METHYLENE CHLORIDE	20.	5.
108-10-1	4-METHYL-2-PENTANONE (MIBK)	ND	30.
100-42-5	STYRENE	ND	5.
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.
127-18-4	TETRACHLOROETHYLENE	ND	5.
109-99-9	TETRAHYDROFURAN	ND	30.
108-88-3	TOLUENE	ND	5.
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.
79-01-6	TRICHLOROETHYLENE	ND	5.
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.
108-05-4	VINYL ACETATE	ND	30.
75-01-4	VINYL CHLORIDE	ND	30.
95-47-6	TOTAL XYLENES	ND	5.

SURROGATE	1,2-DCA-d4	TOL-d8	BFB
PERCENT RECOVERY	97	91	94
CONTROL LIMITS	76-114	88-110	86-115

WCAS

CLIENT: LEVINE-FRICKE SAMPLE: LAB BLANK
WCAS JOB #: 19631

TENTATIVELY IDENTIFIED COMPOUNDS

DATE RECEIVED:	10/02/91	MATRIX:	SOIL
DATE EXTRACTED:	10/02/91	SAMPLE AMOUNT:	1.0G
DATE ANALYZED:	10/02/91	RUN NUMBER:	VBLK940
INSTRUMENT ID:	TRIO1	UNITS:	UG/KG (PPB)

	COMPOUND NAME	FRACTION	APPROXIMATE CONCENTRATION
1	NONE FOUND	VOA	

WEST COAST ANALYTICAL SERVICE

MATRIX SPIKE (MS AND MSD)
% RECOVERY AND RPD SUMMARY

CLIENT : LEVINE-FRICKE
DATE ANALYZED: 10/02/91
WCAS JOB # : 19631

SAMPLE: SB-27-31
MATRIX: SOIL
UNITS : UG/KG (PPB)

VOLATILE COMPOUNDS

COMPOUND	CONC SPIKED	CONC SAMPLE	CONC MS	%REC MS	CONC MSD	%REC MSD	RPD
1,1-DICHLOROETHYLENE	250.	5.ND	236.	94	219.	88	7
BENZENE	250.	5.ND	225.	90	215.	86	5
TRICHLOROETHYLENE	250.	5.ND	237.	95	228.	91	4
TOLUENE	250.	5.ND	249.	100	238.	95	5
CHLOROBENZENE	250.	5.ND	243.	97	231.	92	5

** - Outside Control Limits
* - Outside Warning Limits
RPD=(MS-MSD)/((MS+MSD)/2)*100

RPD: 0 Out of 5 RECOVERY: 0 Out of 10 Outside CONTROL limits

RPD: 0 Out of 5 RECOVERY: 0 Out of 10 Outside WARNING limits

SOIL QUALITY CONTROL LIMITS

	RECOVERY		RPD	
	WARNING	CONTROL	WARNING	CONTROL
1,1-DICHLOROETHYLENE	51-155	25-182	14	20
BENZENE	73-125	60-138	10	14
TRICHLOROETHYLENE	59-120	44-135	11	17
TOLUENE	80-116	71-125	12	18
CHLOROBENZENE	82-109	75-115	8	12

Data Reporting Qualifiers

Value - If the result is a value greater than or equal to the Detection Limit (DL), the value is reported.

ND - Indicates that the compound was analyzed for but not detected. The minimum DL for the sample with the ND is reported based on necessary concentration or dilution actions.

B - Indicates that the compound was found in the sample and the blank, and the value is reported without blank subtraction.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2193	Field Logbook No.: -	Date: 9/30/91	Serial No.: № N- 1091
Project Name: MOBIL - JACK FEE	Project Location: SANTA FE SPRINGS		
Sampler (Signature): [signature]			Samplers: SRA

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8015-MOD	8260	WET-Hg		HOLD	RUSH	REMARKS
✓ RB-2a-3	9/30/91	0920		1	Soil					X				WET - MERCURY
✓ RB-5a-8	9/30/91	0840		1	Soil					X				WET - MERCURY
✓ RB-9a-8	9/30/91	0900		1	Soil					X				WET - MERCURY
✓ SB-27-5	9/30/91	0955		1	Soil							X		
✓ SB-27-10	9/30/91	1000		1	Soil							X		
✓ SB-27-15	9/30/91	1015		1	Soil			X	X					WAIT FOR AXS VERBAL OK
✓ SB-27-20	9/30/91	1025		1	Soil							X		
✓ SB-27-25	9/30/91	1040		1	Soil							X		
✓ SB-27-30	9/30/91	1055		1	Soil			X	X					WAIT FOR AXS VERBAL OK
														* NORMAL TURNAROUND *
														RESULTS TO ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 9/30/91	TIME 1235	RECEIVED BY: (Signature) [signature]	DATE 9/30/91	TIME 12:35
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON BLUE ICE	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: WEST COAST ANALYTICAL SERVICES

№ 19631

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2113	Field Logbook No.: –	Date: [illegible]	Serial No.: Nº N- 1091
Project Name: [illegible] - Jack Lee	Project Location: [illegible]		
Sampler (Signature): [illegible]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8015-mod	8260	[illegible]		HOLD	RUSH	REMARKS
✓ RB-2a-3	[illegible]	1120		1	[illegible]					X				[illegible]
✓ RB-5a-8	[illegible]	1240		1	[illegible]					X				[illegible]
✓ RB-9a-8	[illegible]	[illegible]		1	[illegible]					X				[illegible]
✓ SB-27-5	[illegible]	1155		1	[illegible]							X		
✓ SB-27-10	[illegible]	1000		1	[illegible]							X		
✓ SB-27-15	[illegible]	1015		1	[illegible]			X	X					[illegible]
✓ SB-27-20	[illegible]	1025		1	[illegible]							X		
✓ SB-27-25	[illegible]	1040		1	[illegible]							X		
✓ SB-27-30	[illegible]	1055		1	[illegible]			X	X					[illegible]
														[illegible]
														[illegible]

RELINQUISHED BY: (Signature) [illegible]	DATE [illegible]	TIME 1255	RECEIVED BY: (Signature) [illegible]	DATE 9/2/91	TIME [illegible]
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Packed in Blue Ice	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: [illegible]

L 19631

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FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 213	Field Logbook No.: -	Date: 1/3/11	Serial No.: Nº N- 1091
Project Name: [illegible]	Project Location: [illegible]		
Sampler (Signature): [illegible]			Samplers: [illegible]

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	[illegible]	[illegible]	[illegible]		HOLD	RUSH	REMARKS
✓ RB-2[illegible]-3	[illegible]	[illegible]20		1	[illegible]					X				[illegible]
✓ RB-5[illegible]-3	[illegible]	[illegible]		1	[illegible]					X				[illegible]
✓ RB-[illegible]-3	[illegible]	[illegible]		1	[illegible]					X				[illegible]
✓ [illegible]-27-3	[illegible]	[illegible]		1	[illegible]							X		
✓ [illegible]-27-[illegible]	[illegible]	[illegible]		1	[illegible]							X		
✓ [illegible]-27-[illegible]	[illegible]	[illegible]		1	[illegible]			X	X					[illegible]
✓ [illegible]	[illegible]	[illegible]		1	[illegible]							X		
✓ [illegible]	[illegible]	[illegible]		1	[illegible]							X		
✓ [illegible]	[illegible]	[illegible]		1	[illegible]			X	X					[illegible]
														[illegible]
														[illegible]

RELINQUISHED BY: (Signature) [illegible]	DATE [illegible]	TIME 1230	RECEIVED BY: (Signature) [illegible]	DATE [illegible]	TIME [illegible]
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: [illegible]	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: [illegible]

№ 19631

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

Analytical Report

2193
AMENDED REPORT

10/8/91

LOG NO: A91-07-088

Received: 17 JUL 91
Mailed : 29 JUL 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Mobil Jack Fee

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-088-1	SB-23-10-DUP	17 JUL 91
07-088-2	SB-23-25-DUP	17 JUL 91
07-088-3	SB-24-15-DUP	17 JUL 91

PARAMETER	07-088-1	07-088-2	07-088-3
Nitric Acid Digestion with HCl, Date	07/22/91	07/22/91	07/22/91
Nitric Acid Digestion, Date	07/22/91	07/22/91	07/22/91
Arsenic, mg/kg	3.2	9.4	2.3
Antimony, mg/kg	<0.4	<0.4	<0.4
Barium, mg/kg	91	160	90
Beryllium, mg/kg	0.18	0.22	0.14
Cadmium, mg/kg	0.2	0.4	<0.2
Chromium, mg/kg	17	26	15
Cobalt, mg/kg	7.9	13	6.3
Copper, mg/kg	15	28	14
Lead, mg/kg	6.6	<0.4	<0.4
Mercury, mg/kg	<0.2	<0.2	<0.2
Molybdenum, mg/kg	<0.1	<0.1	<0.1
Nickel, mg/kg	<0.2	0.2	1.5
Selenium, mg/kg	<0.4	<0.4	<0.4
Silver, mg/kg	<0.2	<0.2	<0.2
Thallium, mg/kg	<4	<4	<4
Vanadium, mg/kg	28	47	18
Zinc, mg/kg	41	60	34

RECEIVED
OCT - 9
LEVINE-FRICKE

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A91-07-088

Received: 17 JUL 91
Mailed : 29 JUL 91

Mr. Anthony Silva
Levine-Fricke
1920 Main Street, Suite 750
Irvine, California 92714

Project: 2193/Mobil Jack Fee

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-088-4	RB-12-3-DUP	17 JUL 91

PARAMETER	07-088-4
Sample Held, Not Analyzed	Hold

Amended report:
Thallium has been determined by EPA 7840 (flame atomic absorption). The previously reported results of 150, 230, and 140 mg/kg for A91-07-088-1, -2, and -3 determined by EPA 6010 (ICP) were subject to possible interference from the sample matrix.
--C. Jacks 10/08/91

Charles Jacks

Charles Jacks, Ph.D., Laboratory Director

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

B C ANALYTICAL

BATCH QC REPORT
Definitions and Terms

Accuracy:	The ability of a procedure to determine the "true" concentration of an analyte.
Precision:	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
Batch:	A group of twenty samples or less, of similar matrix type, prepped together or analyzed together if no sample preparation is required, under the same conditions and with the same reagents. The batch must include a method blank, LCS and matrix QC.
Laboratory Control Standard (LCS):	Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method. It also serves to double-check the calibration because it is prepared from a different source than the standard used to calibrate the instrument.
Matrix QC:	Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes).
LC Result:	Laboratory result of an LCS analysis.
LT Result:	Expected result, or true value, of the LCS analysis.
R1, R2 Result:	Result of analyzing replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
R Bar Result:	The average of replicate analysis results.
S1, S2 Result:	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.

S Bar Result: The average of spike analysis results.

True value: The theoretical, or expected, result of a spike sample analysis.

Percent Recovery: The percentage of analyte recovered. For LCS, the percent recovery calculation is: LC/LT x 100.

For spike recoveries, the percent recovery calculation is: $\frac{(\text{S Bar} - \text{R Bar})}{\text{Spike Amount}} \times 100$

Relative Percent Difference (RPD): Calculated using one of the following:

$\frac{(R1 - R2) \times 100}{\text{R Bar}}$ $\frac{(S1 - S2) \times 100}{\text{S Bar}}$

Blank Result: The result of analyzing a method blank (reagent water that is subjected to the same procedures as the samples in a batch); used to determine laboratory contamination.

RDL (Reporting Detection Limit): BCA-assigned limit based on--but not the same as--method detection limits (MDLs) determined using EPA guidelines. The RDL is not adjusted for dilution factors and therefore may not be the same as the sample results.

: ORDER PLACED FOR CLIENT: Levine-Fricke 9107088 :
: BC ANALYTICAL : ANHM LAB : 17:31:48 26 JUL 1991 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.ANAL	METHOD.....	EQUIP.	BATCH	ID.NO
9107088*1	SB-23-10-DUP	DIG,NAQ.HCL	07.22.91	3050		435	6843
		DIG,NAQ,GFA	07.22.91	3050		436	6843
		AS,GFA	07.23.91	7060	554-01	436	
		SB	07.23.91	6010	554-02	435	6843
		BA	07.25.91	6010	554-02	443	
		BE	07.23.91	6010	554-02	435	6843
		CD	07.23.91	6010	554-02	435	6843
		CR	07.23.91	6010	554-02	435	6843
		CO	07.23.91	6010	554-02	435	6843
		CU	07.23.91	6010	554-02	435	6843
		PB	07.23.91	6010	554-02	435	6843
		HG	07.25.91	7471	554-01	80	6843
		MO	07.23.91	6010	554-02	435	6843
		NI	07.23.91	6010	554-02	435	6843
		SE,GFA	07.23.91	7740	554-01	436	
		AG	07.23.91	6010	554-02	435	6843
		TL	07.23.91	6010	554-02	435	6843
		V	07.23.91	6010	554-02	435	6843
		ZN	07.23.91	6010	554-02	435	6843
9107088*2	SB-23-25-DUP	DIG,NAQ.HCL	07.22.91	3050		435	6843
		DIG,NAQ,GFA	07.22.91	3050		436	6843
		AS,GFA	07.23.91	7060	554-01	436	
		SB	07.23.91	6010	554-02	435	6843
		BA	07.25.91	6010	554-02	443	
		BE	07.23.91	6010	554-02	435	6843
		CD	07.23.91	6010	554-02	435	6843
		CR	07.23.91	6010	554-02	435	6843
		CO	07.23.91	6010	554-02	435	6843
		CU	07.23.91	6010	554-02	435	6843
		PB	07.23.91	6010	554-02	435	6843
		HG	07.25.91	7471	554-01	80	6843
		MO	07.23.91	6010	554-02	435	6843
		NI	07.23.91	6010	554-02	435	6843
		SE,GFA	07.23.91	7740	554-01	436	
		AG	07.23.91	6010	554-02	435	6843
		TL	07.23.91	6010	554-02	435	6843
		V	07.23.91	6010	554-02	435	6843
		ZN	07.23.91	6010	554-02	435	6843
9107088*3	SB-24-15-DUP	DIG,NAQ.HCL	07.22.91	3050		435	6843
		DIG,NAQ,GFA	07.22.91	3050		436	6843
		AS,GFA	07.23.91	7060	554-01	436	
		SB	07.23.91	6010	554-02	435	6843
		BA	07.25.91	6010	554-02	443	
		BE	07.23.91	6010	554-02	435	6843
		CD	07.23.91	6010	554-02	435	6843

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.ANAL	METHOD.....	EQUIP.	BATCH	ID.NO
		CR	07.23.91	6010	554-02	435	6843
		CO	07.23.91	6010	554-02	435	6843
		CU	07.23.91	6010	554-02	435	6843
		PB	07.23.91	6010	554-02	435	6843
		HG	07.25.91	7471	554-01	80	6843
		MO	07.23.91	6010	554-02	435	6843
		NI	07.23.91	6010	554-02	435	6843
		SE,GFA	07.23.91	7740	554-01	436	
		AG	07.23.91	6010	554-02	435	6843
		TL	07.23.91	6010	554-02	435	6843
		V	07.23.91	6010	554-02	435	6843
		ZN	07.23.91	6010	554-02	435	6843
9107088*4	RB-12-3-DUP	HOLD	07.22.91				

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT
ORDER: A9107088

DATE REPORTED : 07/26/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Arsenic	07.23.91	436	0.052	0.060	mg/L	87
Antimony	07.23.91	435	2.74	3.00	mg/L	91
Antimony	07.24.91	435	2.90	3.00	mg/L	97
Barium	07.25.91	443	2.95	3.00	mg/L	98
Beryllium	07.23.91	435	2.80	3.00	mg/L	93
Cadmium	07.23.91	435	2.98	3.00	mg/L	99
Chromium	07.23.91	435	2.82	3.00	mg/L	94
Cobalt	07.23.91	435	2.77	3.00	mg/L	92
Copper	07.23.91	435	2.79	3.00	mg/L	93
Lead	07.23.91	435	2.71	3.00	mg/L	90
Lead	07.24.91	435	2.93	3.00	mg/L	98
Mercury	07.25.91	80	0.0032	0.004	mg/L	80
Molybdenum	07.23.91	435	2.86	3.00	mg/L	95
Nickel	07.23.91	435	2.63	3.00	mg/L	88
Selenium	07.23.91	436	0.062	0.060	mg/L	103
Silver	07.23.91	435	1.06	2.00	mg/L	53
Thallium	07.23.91	435	2.76	3.00	mg/L	92
Vanadium	07.23.91	435	2.83	3.00	mg/L	94
Zinc	07.23.91	435	2.86	3.00	mg/L	95

BC ANALYTICAL

BATCH QC REPORT
ORDER: A9107088

DATE REPORTED : 07/26/91

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE %DIFF
Arsenic	07.23.91	436	3.2	4.2	mg/kg	27
Antimony	07.23.91	435	<0.4	<0.4	mg/kg	NA
Barium	07.25.91	443	110	110	mg/kg	0
Beryllium	07.23.91	435	0.18	0.18	mg/kg	0
Cadmium	07.23.91	435	0.2	<0.2	mg/kg	NA
Chromium	07.23.91	435	17	16	mg/kg	6
Cobalt	07.23.91	435	7.9	7.7	mg/kg	3
Copper	07.23.91	435	15	15	mg/kg	0
Lead	07.23.91	435	6.6	7.1	mg/kg	7
Mercury	07.25.91	80	<0.2	<0.2	mg/kg	NA
Molybdenum	07.23.91	435	<0.1	<0.1	mg/kg	NA
Nickel	07.23.91	435	<0.2	<0.2	mg/kg	NA
Selenium	07.23.91	436	<0.4	<0.4	mg/kg	NA
Silver	07.23.91	435	<0.2	<0.2	mg/kg	NA
Thallium	07.23.91	435	150	150	mg/kg	0
Vanadium	07.23.91	435	28	28	mg/kg	0
Zinc	07.23.91	435	41	40	mg/kg	2

BC ANALYTICAL

ORDER QC REPORT FOR A9107088

DATE REPORTED : 07/26/91

MATRIX QC PRECISION (DUPLICATES)
FOR SAMPLES ON THIS ORDER

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE %DIFF
Arsenic	9107088*1	07.23.91	436	3.2	4.2	mg/kg	27.02
Antimony	9107088*1	07.23.91	435	<0.4	<0.4	mg/kg	NA
Beryllium	9107088*1	07.23.91	435	0.18	0.18	mg/kg	0
Cadmium	9107088*1	07.23.91	435	0.2	<0.2	mg/kg	NA
Chromium	9107088*1	07.23.91	435	17	16	mg/kg	6.06
Cobalt	9107088*1	07.23.91	435	7.9	7.7	mg/kg	2.56
Copper	9107088*1	07.23.91	435	15	15	mg/kg	0
Lead	9107088*1	07.23.91	435	6.6	7.1	mg/kg	7.29
Molybdenum	9107088*1	07.23.91	435	<0.1	<0.1	mg/kg	NA
Nickel	9107088*1	07.23.91	435	<0.2	<0.2	mg/kg	NA
Selenium	9107088*1	07.23.91	436	<0.4	<0.4	mg/kg	NA
Silver	9107088*1	07.23.91	435	<0.2	<0.2	mg/kg	NA
Thallium	9107088*1	07.23.91	435	150	150	mg/kg	0
Vanadium	9107088*1	07.23.91	435	28	28	mg/kg	0
Zinc	9107088*1	07.23.91	435	41	40	mg/kg	2.46

BC ANALYTICAL

BATCH QC REPORT
ORDER: A9107088

DATE REPORTED : 07/26/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCEN RECOVE
Arsenic	07.23.91	436	8.6	8.6	3.7	mg/kg	10
Antimony	07.23.91	435	25.5	58.2	<0.4	mg/kg	4
Barium	07.25.91	443	170	170	110	mg/kg	10
Beryllium	07.23.91	435	51.2	58.4	0.18	mg/kg	8
Cadmium	07.23.91	435	53.1	58.2	0.2	mg/kg	9
Chromium	07.23.91	435	66	74	16.5	mg/kg	8
Cobalt	07.23.91	435	56	66	7.8	mg/kg	8
Copper	07.23.91	435	65.3	73.2	15	mg/kg	8
Lead	07.23.91	435	53.1	65.0	6.85	mg/kg	8
Mercury	07.25.91	80	1.23	1.26	<0.2	mg/kg	9
Molybdenum	07.23.91	435	49.4	58.2	<0.1	mg/kg	8
Nickel	07.23.91	435	45.5	58.2	<0.2	mg/kg	7
Selenium	07.23.91	436	4.68	4.88	<0.4	mg/kg	9
Silver	07.23.91	435	20.1	38.8	<0.2	mg/kg	5
Thallium	07.23.91	435	197	204	150	mg/kg	SO
Vanadium	07.23.91	435	79	86	28	mg/kg	8
Zinc	07.23.91	435	90.5	98.2	40.5	mg/kg	8

SOR = Spike Out of Range
(relative to high sample concentration)

BC ANALYTICAL

ORDER QC REPORT FOR A9107088

DATE REPORTED : 07/26/91

MATRIX QC ACCURACY (SPIKES)
FOR SAMPLES ON THIS ORDER

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVE
Arsenic	9107088*1	07.23.91	436	8.6	8.6	3.7	mg/kg	100
Antimony	9107088*1	07.23.91	435	25.5	58.2	0	mg/kg	44
Beryllium	9107088*1	07.23.91	435	51.2	58.4	0.18	mg/kg	88
Cadmium	9107088*1	07.23.91	435	53.1	58.2	0.2	mg/kg	91
Chromium	9107088*1	07.23.91	435	66	74	16.5	mg/kg	86
Cobalt	9107088*1	07.23.91	435	56	66	7.8	mg/kg	83
Copper	9107088*1	07.23.91	435	65.3	73.2	15	mg/kg	86
Lead	9107088*1	07.23.91	435	53.1	65.0	6.85	mg/kg	80
Molybdenum	9107088*1	07.23.91	435	49.4	58.2	0	mg/kg	85
Nickel	9107088*1	07.23.91	435	45.5	58.2	0	mg/kg	78
Selenium	9107088*1	07.23.91	436	4.68	4.88	0	mg/kg	96
Silver	9107088*1	07.23.91	435	20.1	38.8	0	mg/kg	52
Thallium	9107088*1	07.23.91	435	197	204	150	mg/kg	SOR
Vanadium	9107088*1	07.23.91	435	79	86	28	mg/kg	88
Zinc	9107088*1	07.23.91	435	90.5	98.2	40.5	mg/kg	87

SOR = Spike Out of Range
(relative to high sample concentration)

BC ANALYTICAL

BATCH QC REPORT
ORDER: A9107088

DATE REPORTED : 07/26/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Arsenic	07.23.91	436	0.0	0.2	mg/kg
Antimony	07.23.91	435	0.19	0.4	mg/kg
Antimony	07.24.91	435	0.00	10	mg/kg
Barium	07.25.91	443	0.018	0.02	mg/kg
Beryllium	07.23.91	435	0.013	0.001	mg/kg
Cadmium	07.23.91	435	0.00	0.2	mg/kg
Chromium	07.23.91	435	0.14	0.2	mg/kg
Cobalt	07.23.91	435	0.00	0.003	mg/kg
Copper	07.23.91	435	0.19	0.6	mg/kg
Lead	07.23.91	435	0.00	0.4	mg/kg
Lead	07.24.91	435	0.0	4	mg/kg
Mercury	07.25.91	80	0.000	0.2	mg/kg
Molybdenum	07.23.91	435	0.125	0.1	mg/kg
Nickel	07.23.91	435	0.10	0.2	mg/kg
Selenium	07.23.91	436	0.020	0.4	mg/kg
Silver	07.23.91	435	0.019	0.04	mg/kg
Thallium	07.23.91	435	0.00	0.04	mg/kg
Vanadium	07.23.91	435	0.017	0.002	mg/kg
Zinc	07.23.91	435	0.00	0.2	mg/kg

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

A91-07-088

Project No.: 2193	Field Logbook No.: –	Date: 7/17/91	Serial No.: Nº N- 0879
Project Name: Mobil Jack Fee	Project Location: Santa Fe Springs		
Sampler (Signature): [signature]			Samplers: S.O.R

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624					HOLD	RUSH	REMARKS
SB-23-10-Dup	7/17/91	0830		1	Soil							X		
SB-23-25 Dup	7/17/91	0900		1	Soil							X		
~~SB-24-10 Dup~~	7/17/91	1100		1	Soil							X		SB-24-15-Dup. (ES)
RB-12-3-Dup	7/17/91	1530		1	Soil							X		
														run Cam metals: on SB-23-10-Dup SB-23-25 Dup SB-24-15 Dup (ES) 7/18/91
														OK TO RUN ANALYSES - S.O.R 7/19/91
														*RESULTS TO: ANTHONY SILVA

RELINQUISHED BY: (Signature) [signature]	DATE 7/17/91	TIME 6:40	RECEIVED BY: (Signature) Michael Bettencourt	DATE 7/17/91	TIME 1843
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: PACKED ON ICE	DATE	TIME	LAB COMMENTS:		

Sampler: LEVINE-FRICKE
1920 Main St., Ste. 750
Irvine, CA 92714

LEVINE-FRICKE
~~4019 Westerly Place, Suite 103~~
~~Newport Beach, California 92660~~
(714) 955-1390 FAX (714) 955-0683

Analytical Laboratory: BC ANALYTICAL

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

TABLE L-1

Comparison of EPA Method 418.1 and EPA Method 8015 (Modified)

Analytical Results On Selected Soil Sample Results

LF 2193

(results reported in parts per million - ppm)

Sample Identification	Modified EPA Method 8015 C5-C10	C7-C20	C10-C20	C5-C30	C20-C30	Subtotal	EPA Method 418.1
Perimeter Sampling (NW Property Boundary)							
SS-1	---	---	520	---	200	720	2000
SS-2	---	---	---	---	280	280	1100
SS-3	---	---	9500	---	3900	13400	15000
Perimeter Sampling (NE Property Boundary)							
SS-4	---	---	---	---	800	800	800
SS-5	---	---	---	---	220	220	420
SS-6	---	---	---	---	---	ND	ND
SS-7	1200*	---	---	---	3000	3000	2100
SS-8	---	---	---	---	600	600	310
SS-9	---	---	---	---		ND	30
Perimeter Sampling (SE Property Boundary)							
SS-10	---	---	---	---	120	120	300
SS-11	220	---	---	---	4000	4220	1400
SS-12	---	---	---	---	31000	31000	1300
SS-13	---	---	---	---	---	ND	140
Former Above Ground Storage Tank Area							
T3B-10	---	7400	---	---	1800	9200	9900
T5A-1	---	---	---	---	200	200	ND
T9A-1a	4300	---	890	---	340	5530	3600
T9A-1b	---	---	---	---	---	ND	29
SB-3-15	---	---	---	8400	---	8400	6100
SB-27-30	---	---	---	29000	---	29000	NA
SS-12	---	---	---	---	31000	31000	1300
SS-13	---	---	---	---	---	ND	140
Isolated Samples							
T4B-1a	---	1700	---	---	390	2090	4000
T1A-4	---	---	---	---	110	110	180
T5A-1	---	---	---	---	200	200	NA
T7A-1	---	---	---	---	1500	1500	1000

ND Not Detected above laboratory method detection limits

NA Not Analyzed

C5-C10 Gasoline

C7-C20 Undifferentiated Hydrocarbons

C10-C20 Diesel Fuel

C5-C30 Undifferentiated Total Hydrocarbons

C20-C30 Heavy Hydrocarbons

--- Hydrocarbon range not detected in sample above laboratory detection limits

*C7-C12 Mineral Spirits

2193

WEST COAST
ANALYTICAL
SERVICE, INC.
ANALYTICAL CHEMISTS

February 14, 1991

Mr. Anthony Silva
LEVINE-FRICKE
1920 Main Street, Suite 750
Irvine, CA 92714

Ref: WCAS Job No. 17390, 17429, 17446 & 17559

Dear Mr. Silva:

Please find enclosed the 8015 chromatograms for your project Mobil-Jalk Fee that you've requested.

Sincerely,
WEST COAST ANALYTICAL SERVICE, INC.

Ramona Lee Northington

Ramona Lee Northington
Laboratory Director

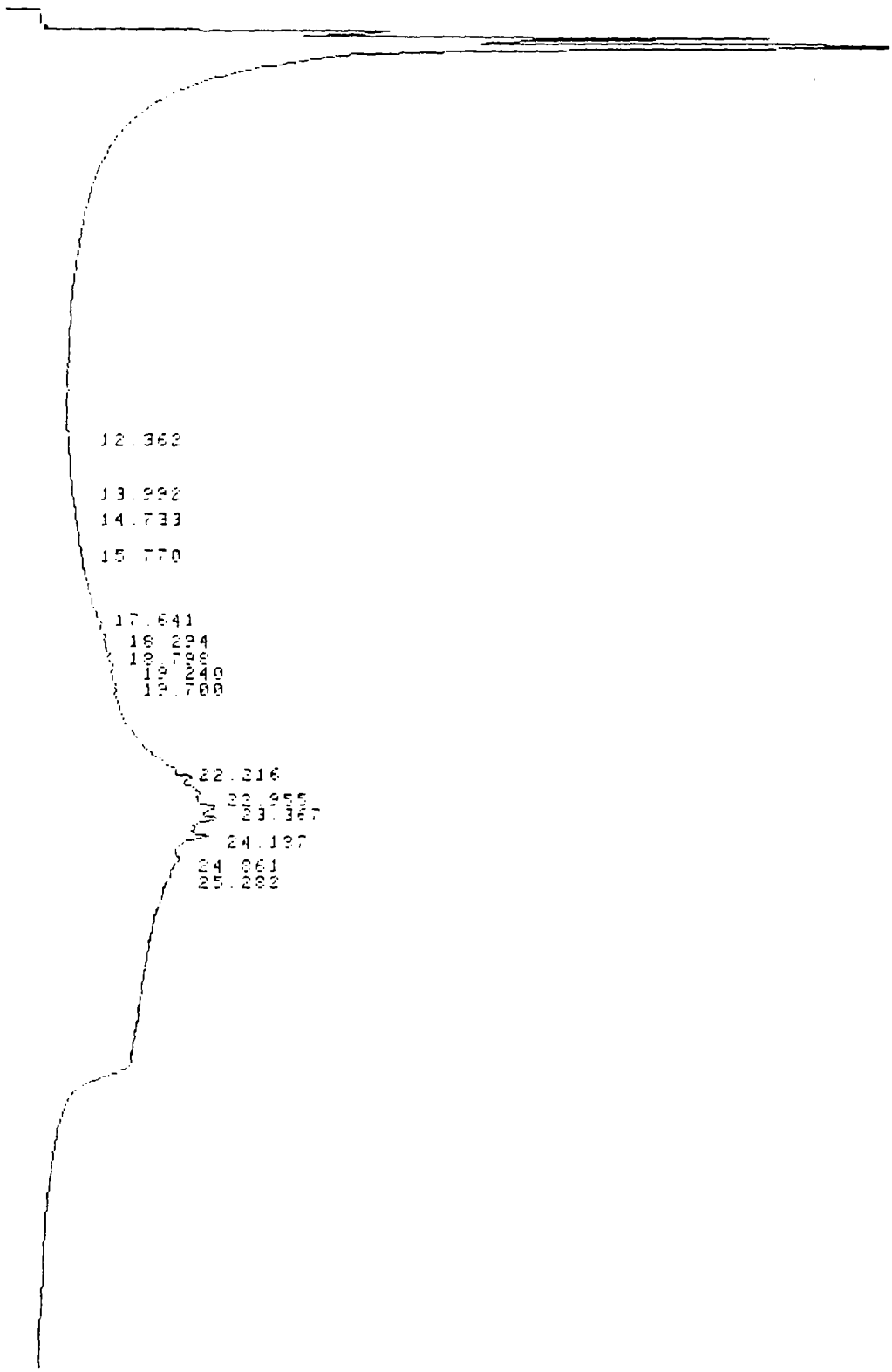
RLN/am

Enclosures

RECEIVED
FEB 15
LEVINE-FRICKE

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

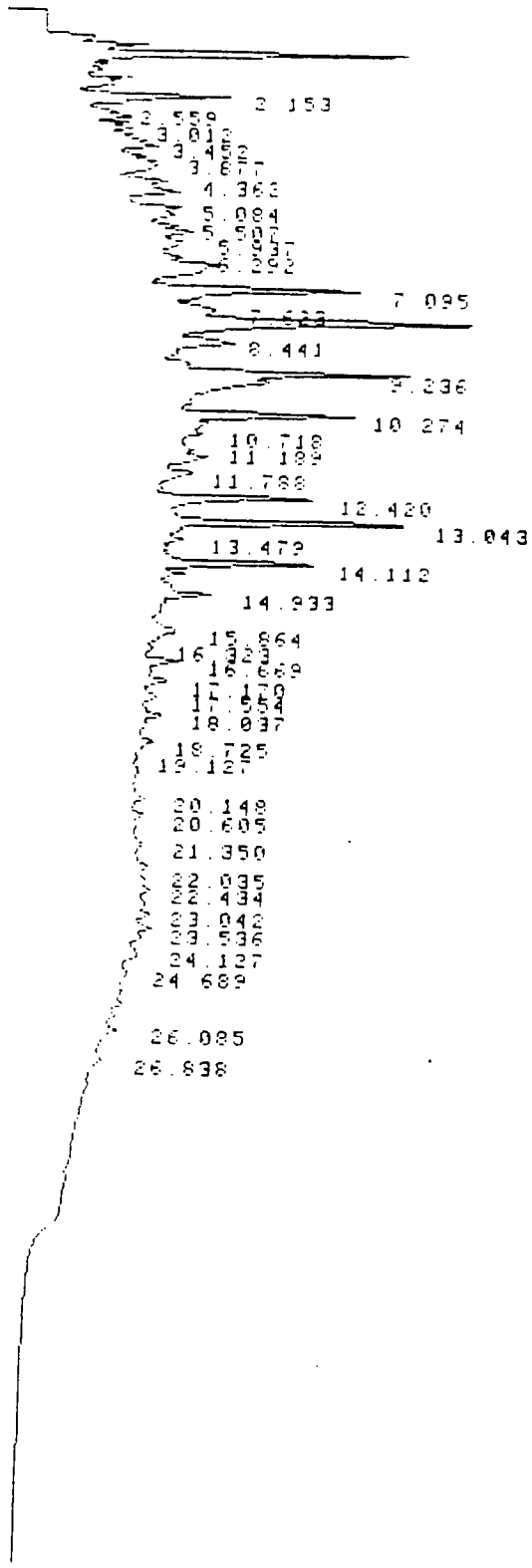
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 5%



RECALCULATE ON FILE: FUEL669

CHANNEL : 4A - 1 TITLE: 8015 21:26 28 DEC 90

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%

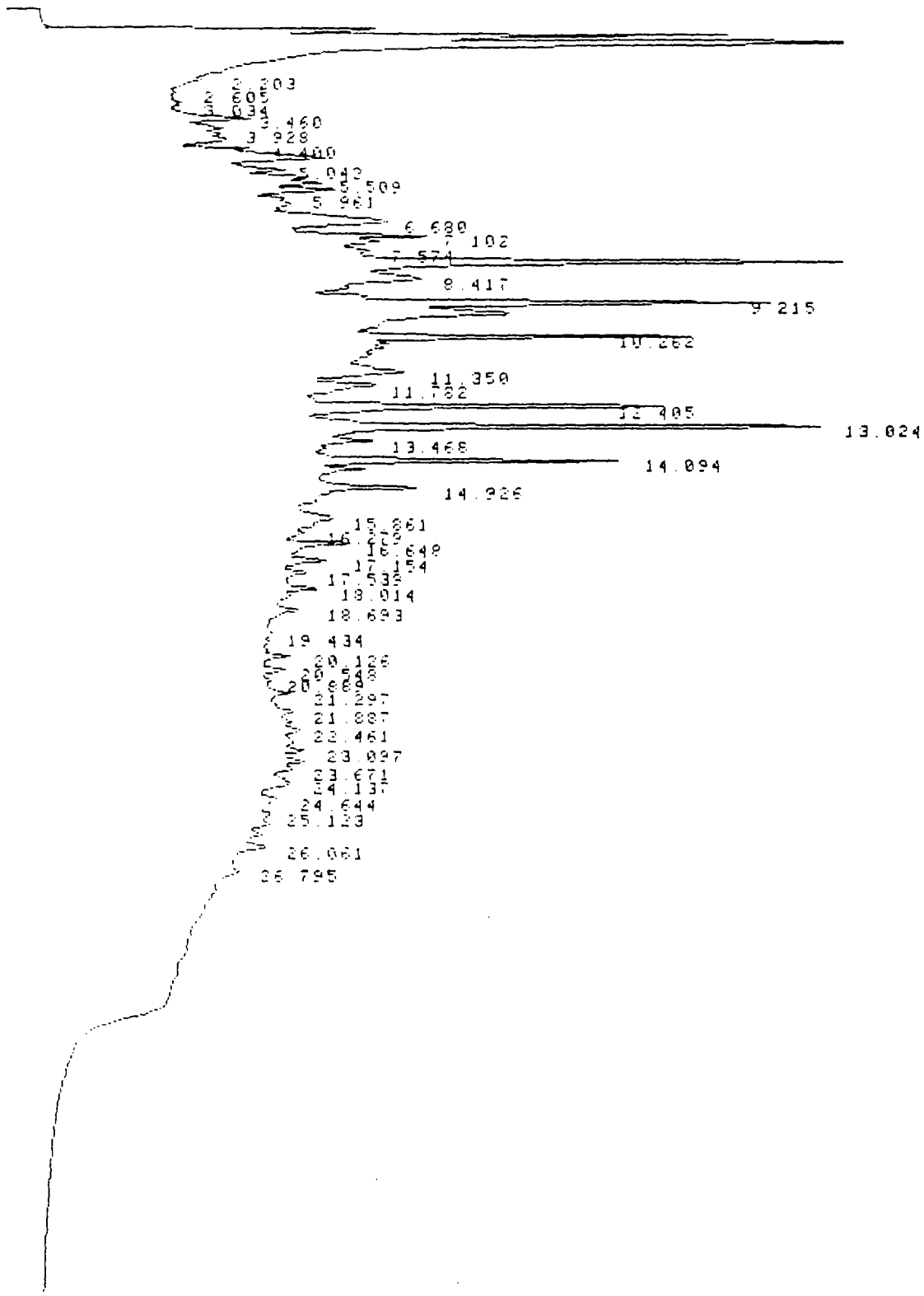


RECALCULATE ON FILE: FUEL671

CHANNEL: 4A - 1 TITLE: 8015

22:56 28 DEC 90

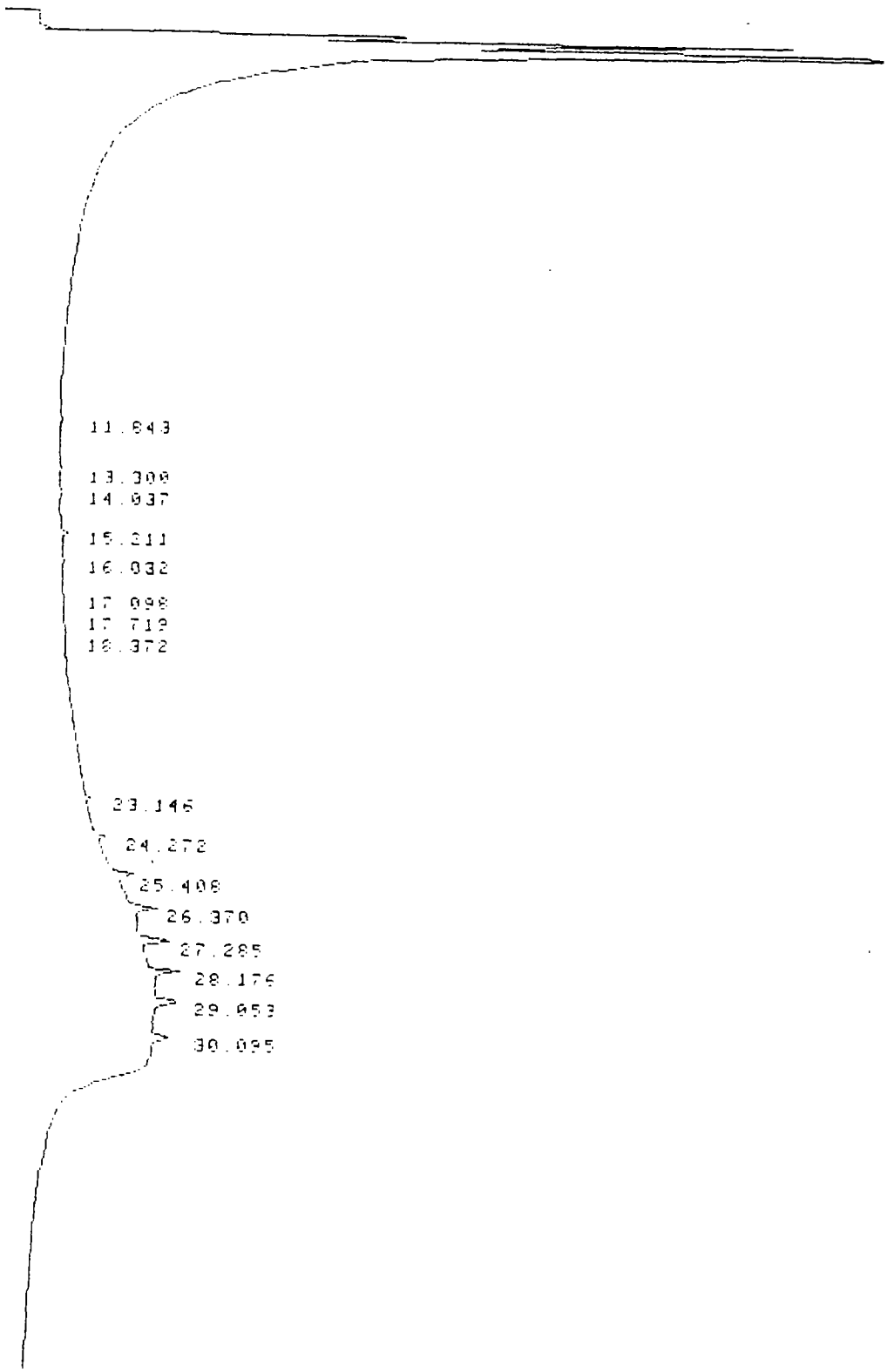
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 5%



RECALCULATE ON FILE: FUEL670

CHANNEL: 4A - 1 TITLE: 8015 22:11 28 DEC 90

CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 5%



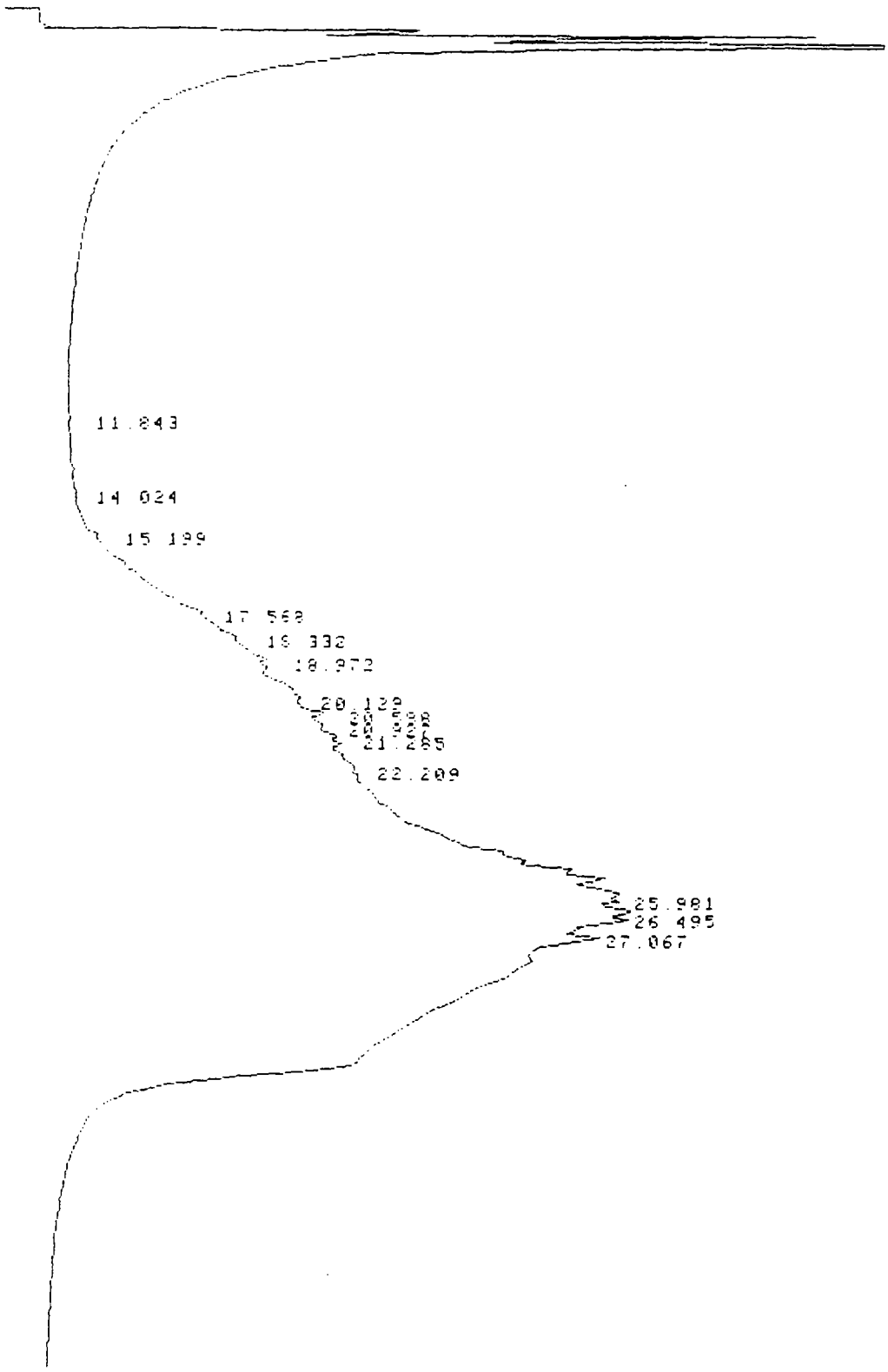
RECALCULATE ON FILE: FUEL617

CHANNEL: 4A - 1 TITLE: 8015

4:29 27 DEC 90

T-7A-1 5.0 g

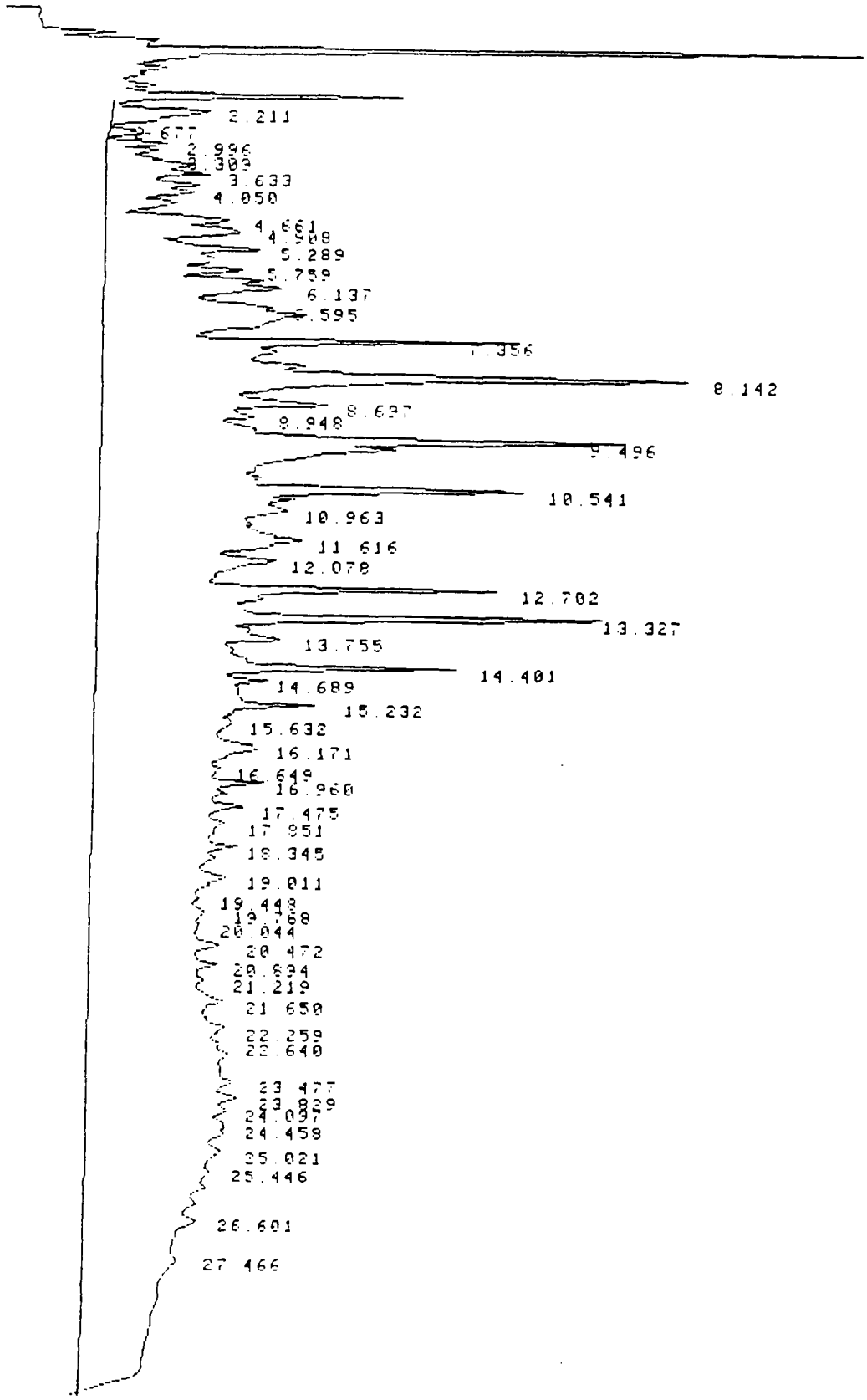
CHART SPEED 0.5 CM/MIN
ATTEN: 8 ZERO: 5%



RECALCULATE ON FILE: FUEL610

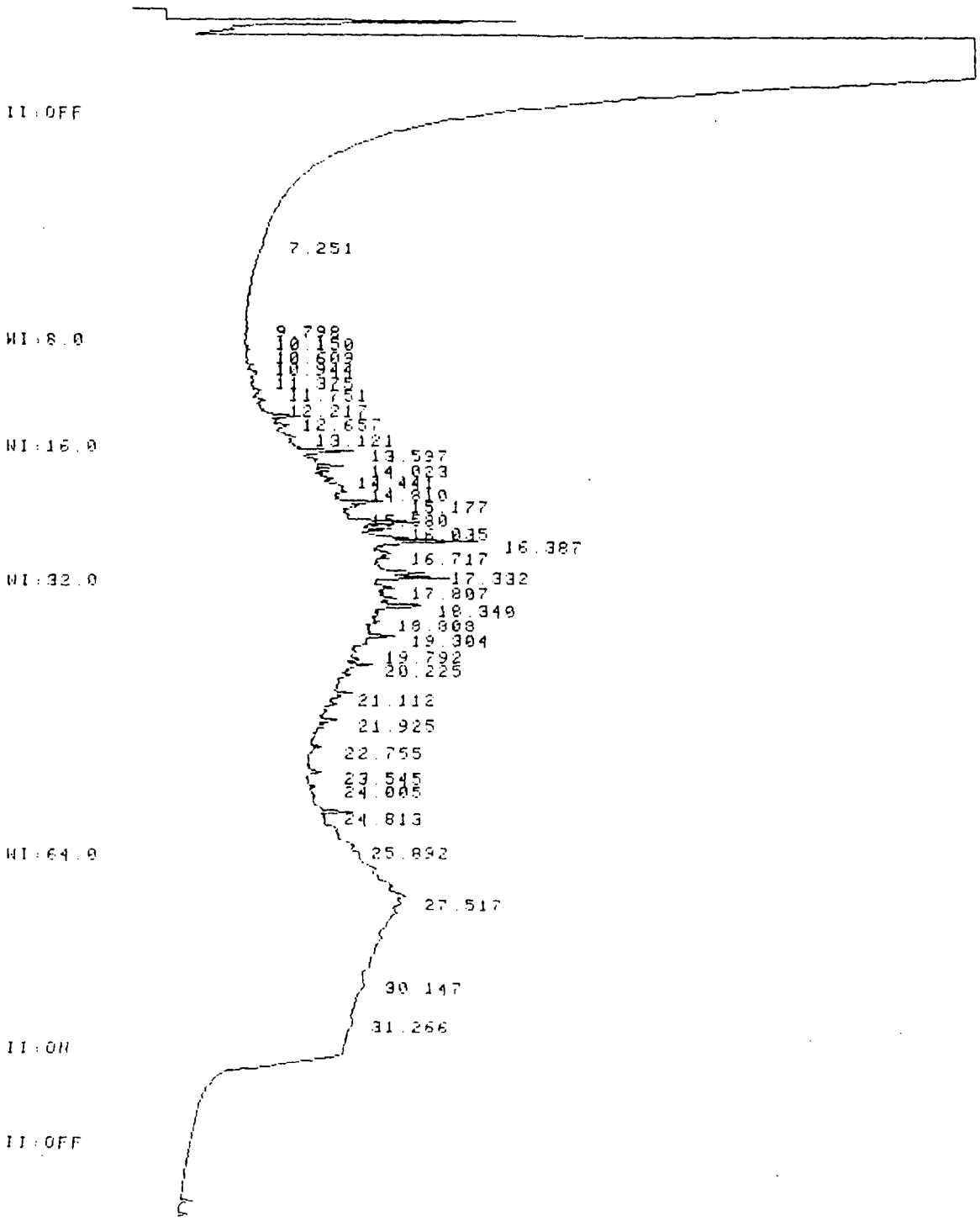
10
REPLAY

CHART SPEED 0.7 CM/MIN
ATTEN: 32 ZERO: 5%



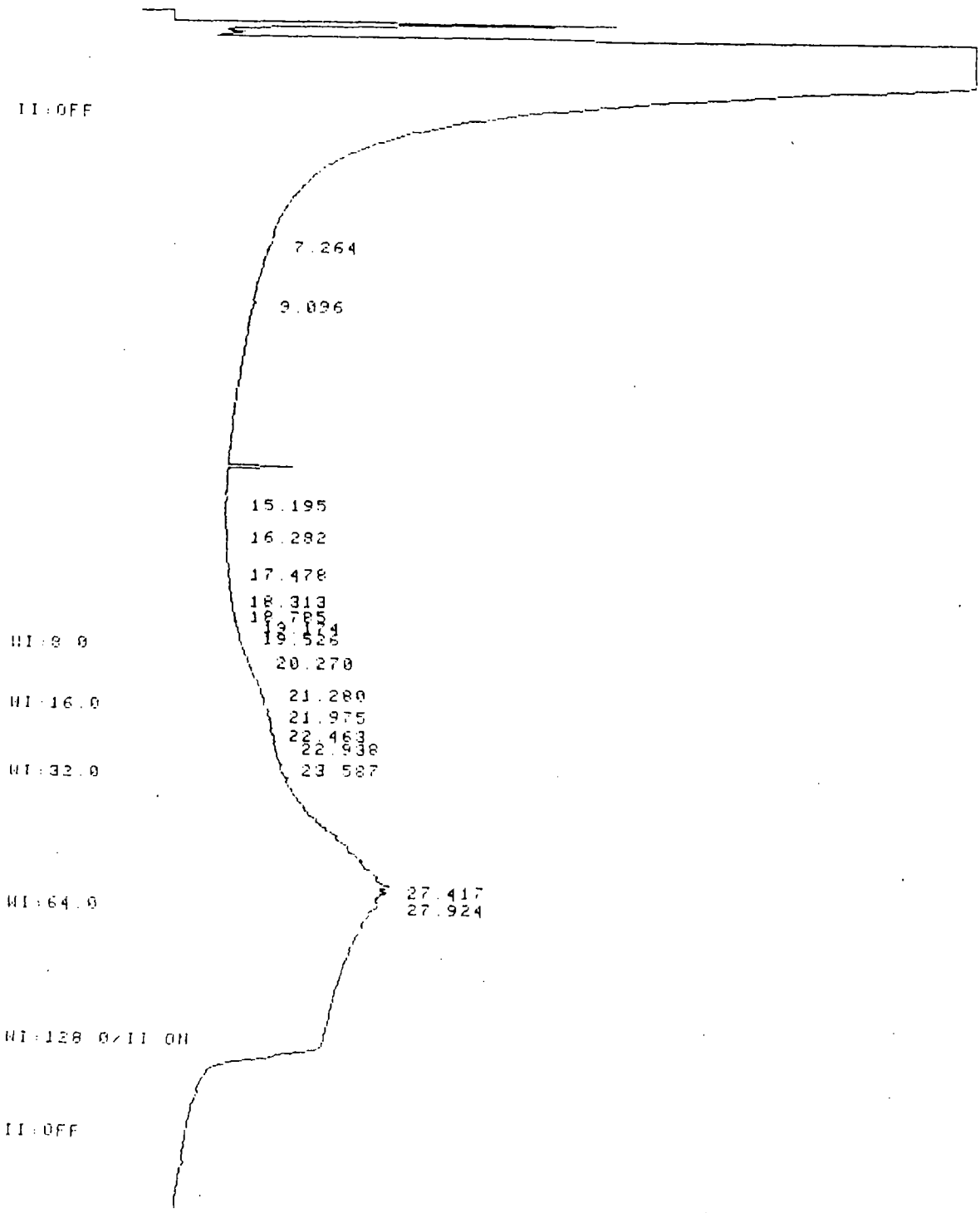
14 #19049 SS-1 4.97g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



3 #19049 SS-2 4.96g

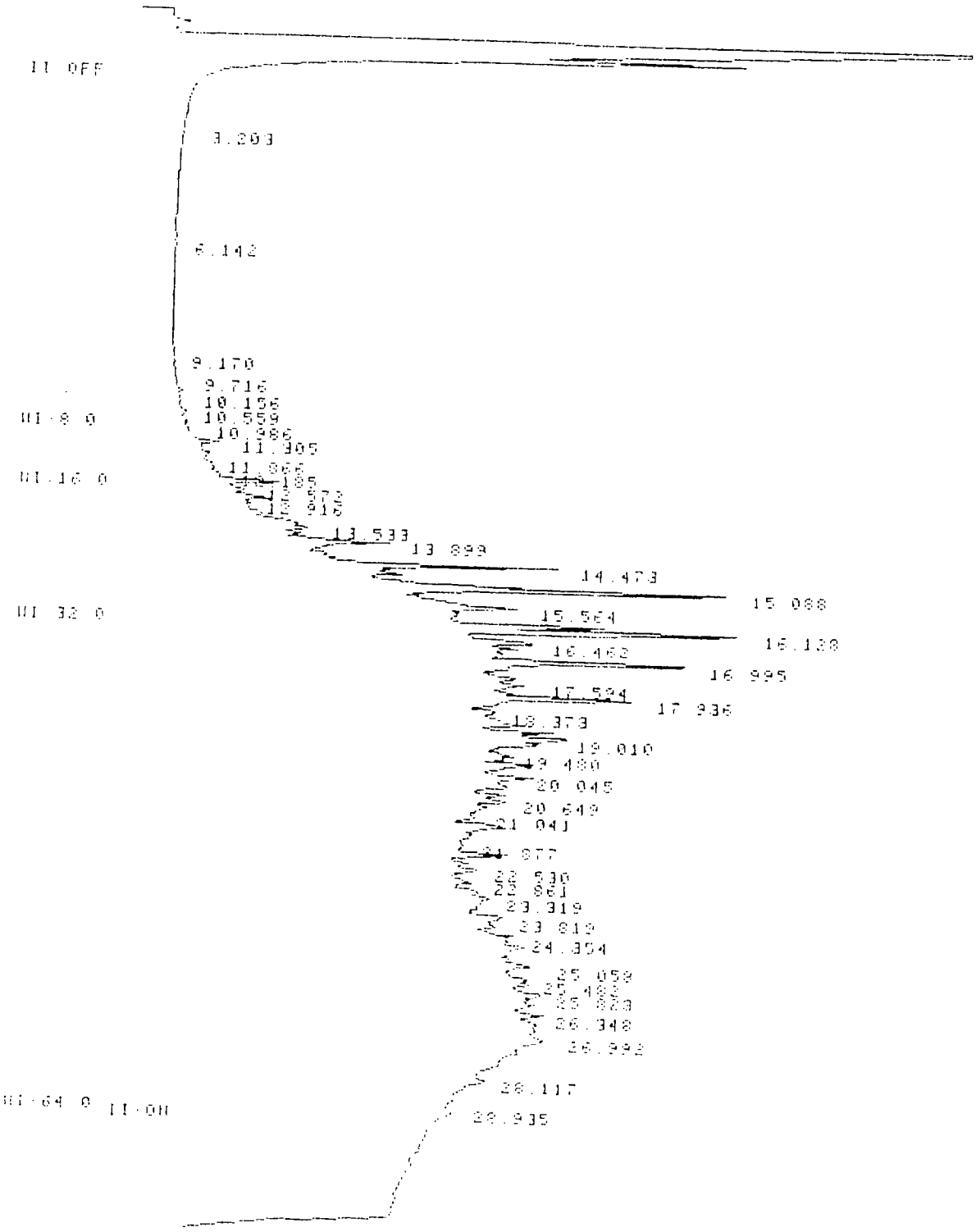
CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



SAVE FILE: RAW

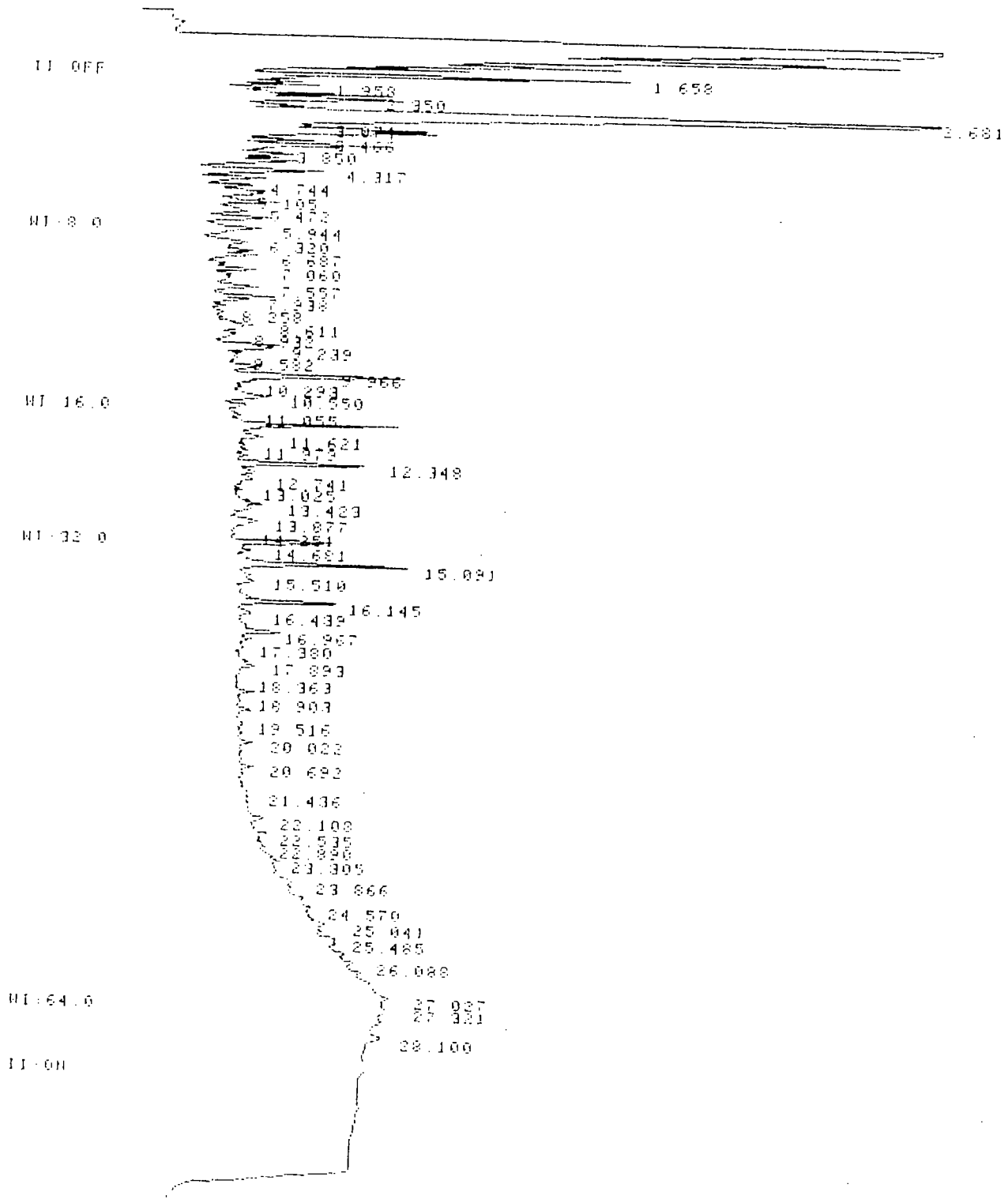
5 #19049 SS-3 5.03g DIC 1:10

CHART SPEED 0.6 CM/MIN
ATTEN: 64 ZERO: 5%



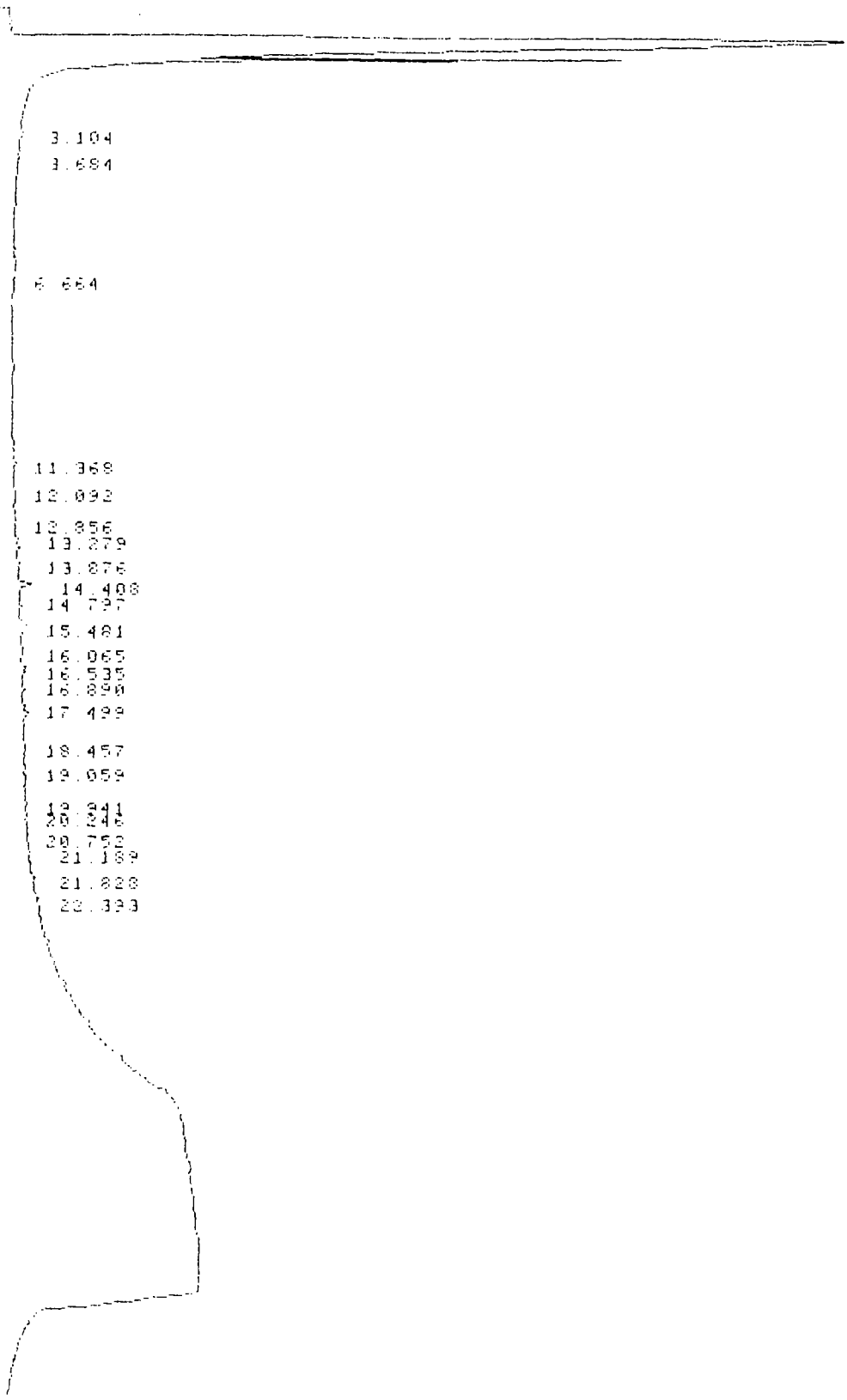
4 #19049 T4A-1a 5.00g DIL 1:4

CHART SPEED 0.6 CM/MIN
ATTEN: 64 ZERO: 5%



12 #14044 T4A-1b 4.44g

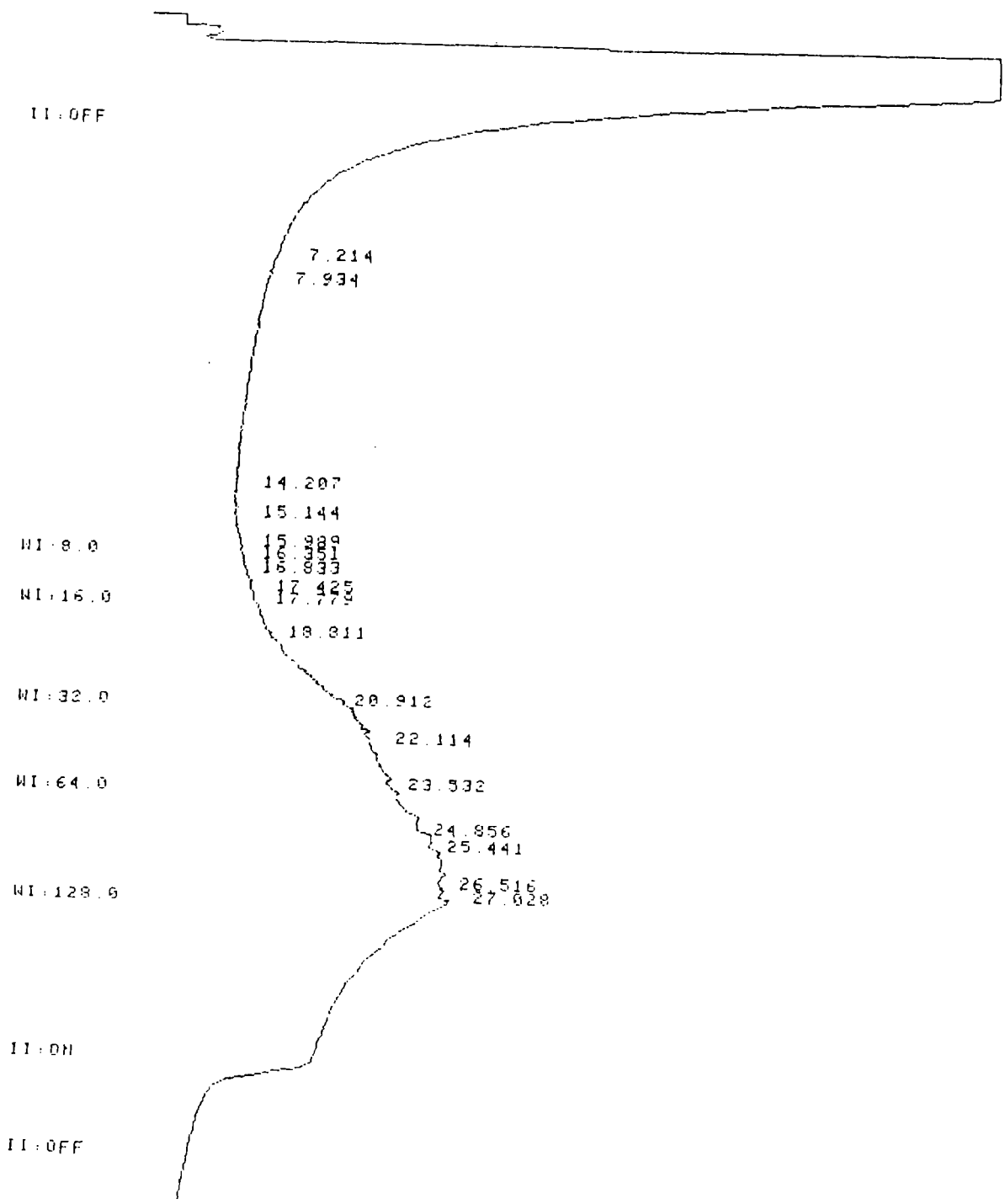
CHART SPEED 0.6 CM/MIN
ATTEN: 64 ZERO: 5%



SAVE FILE: RAW FUEL484

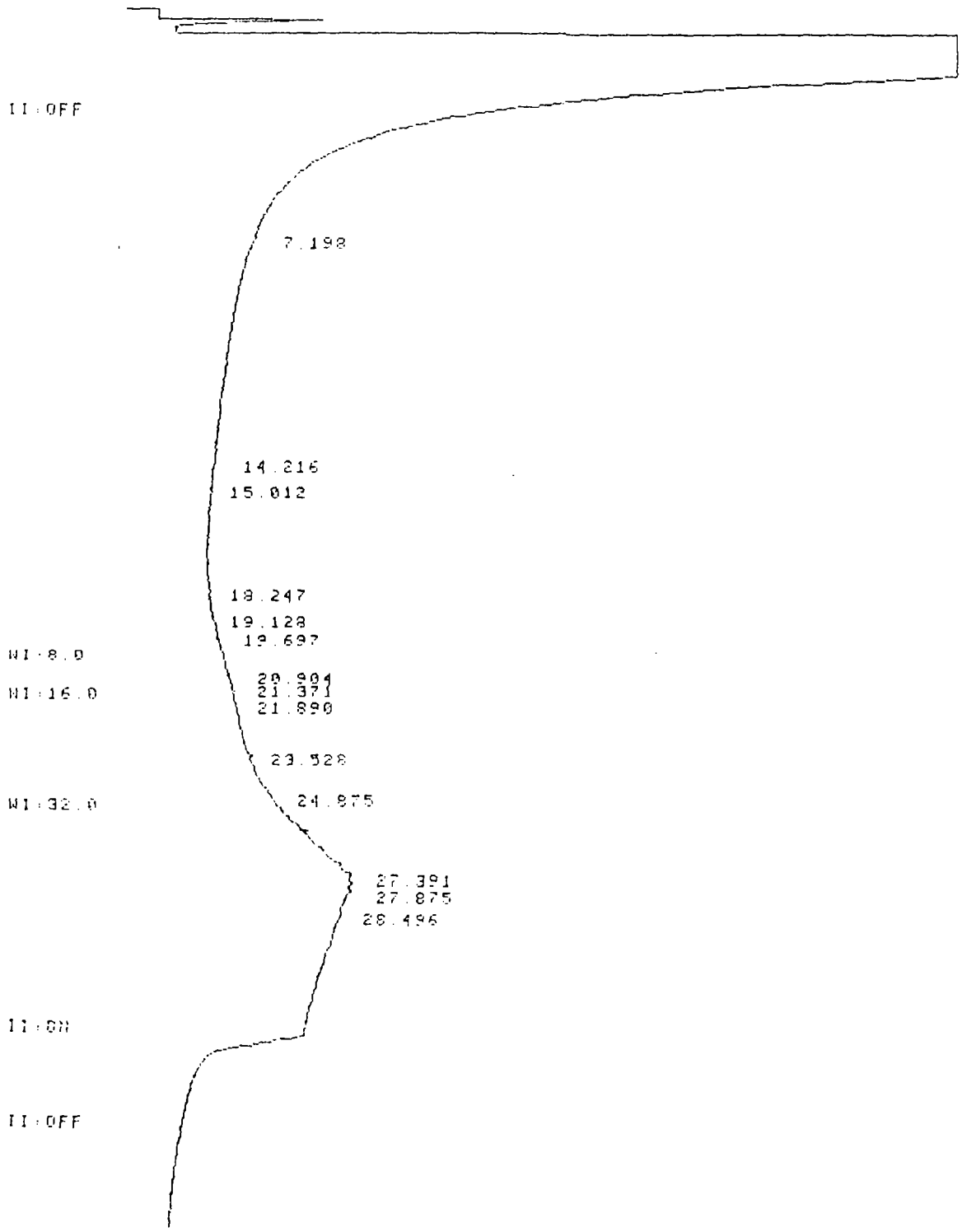
2 9 #19041 SS-4 5.05g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



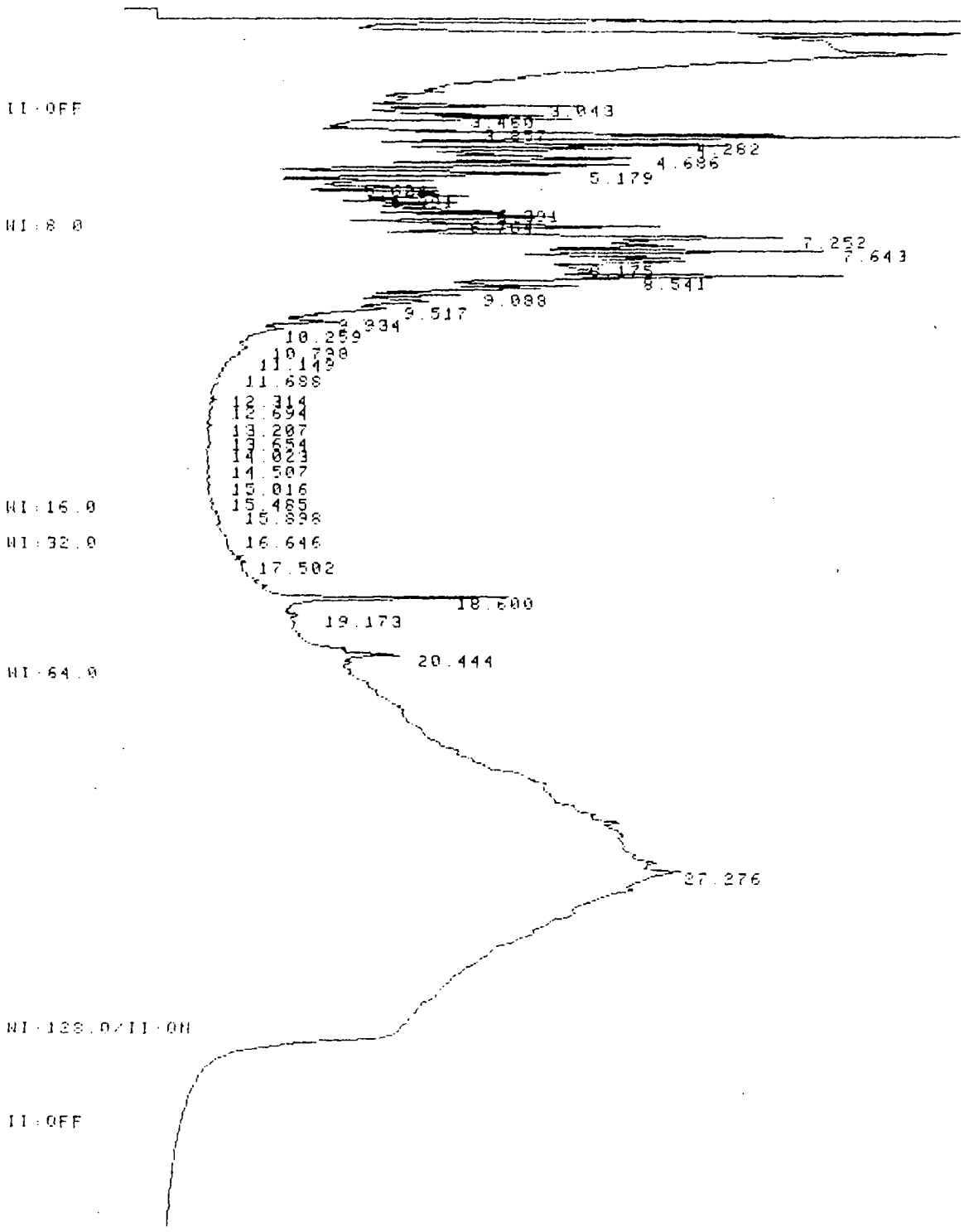
32 #19041 SS-5 5.00g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



36 REPLAY #19041 SS-7 5.04g

CHART SPEED 0.5 CM/MIN
ATTEN: 128 ZERO: 5%



19041 SS-8 5.04g

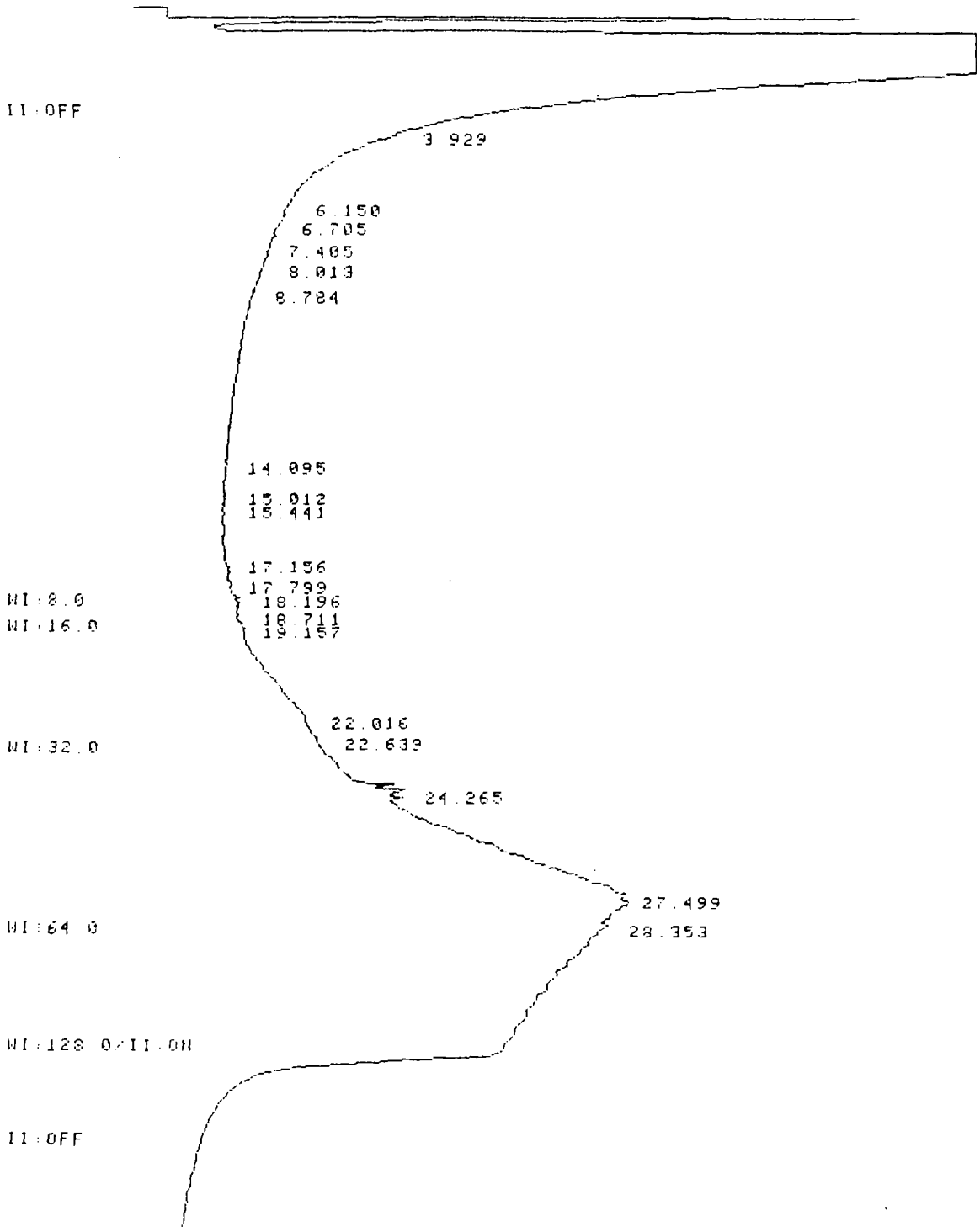
~~# 19041 SS-8 5.04g~~

~~CS_2 BLANK~~

~~CS_2 BLANK~~

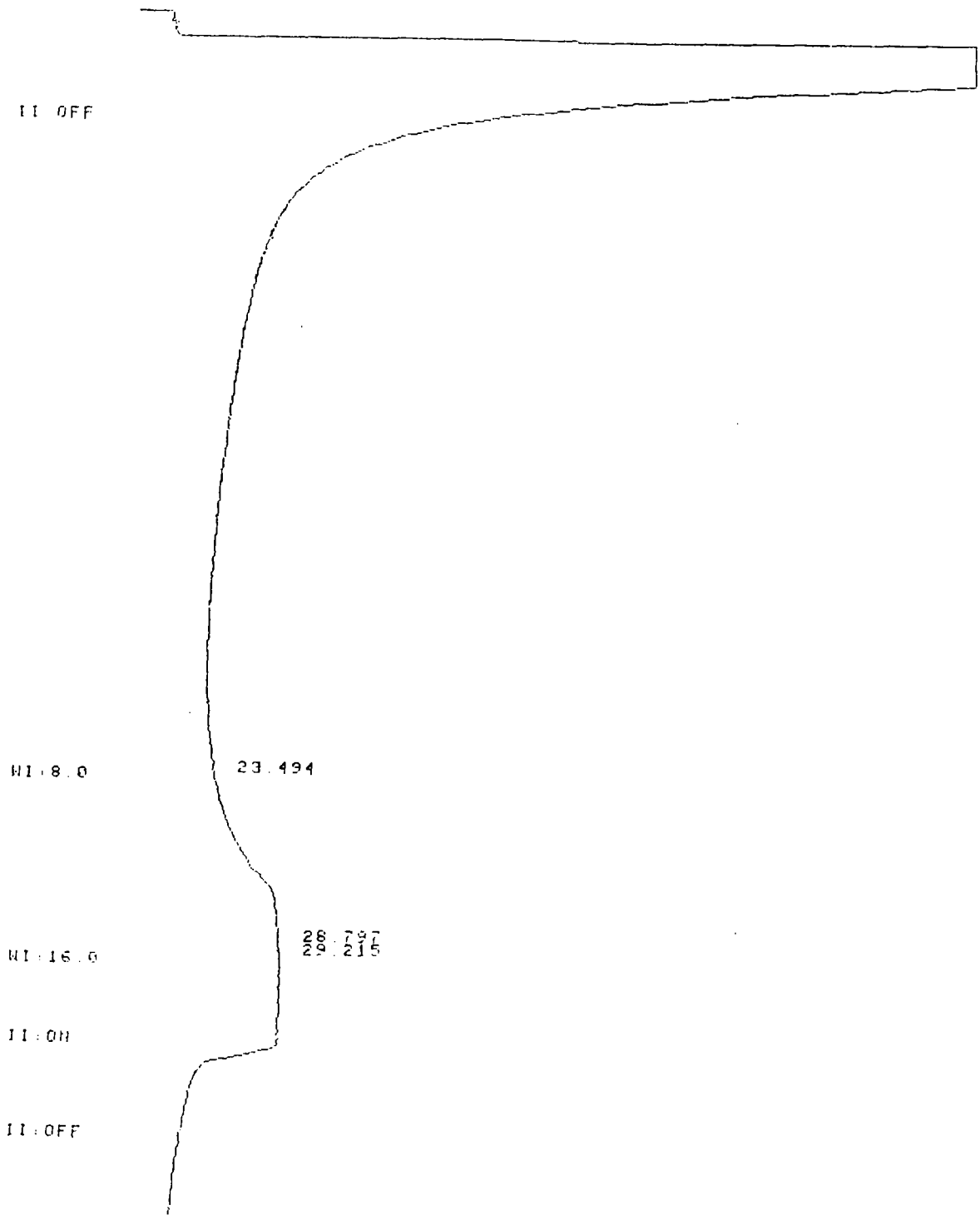
37

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



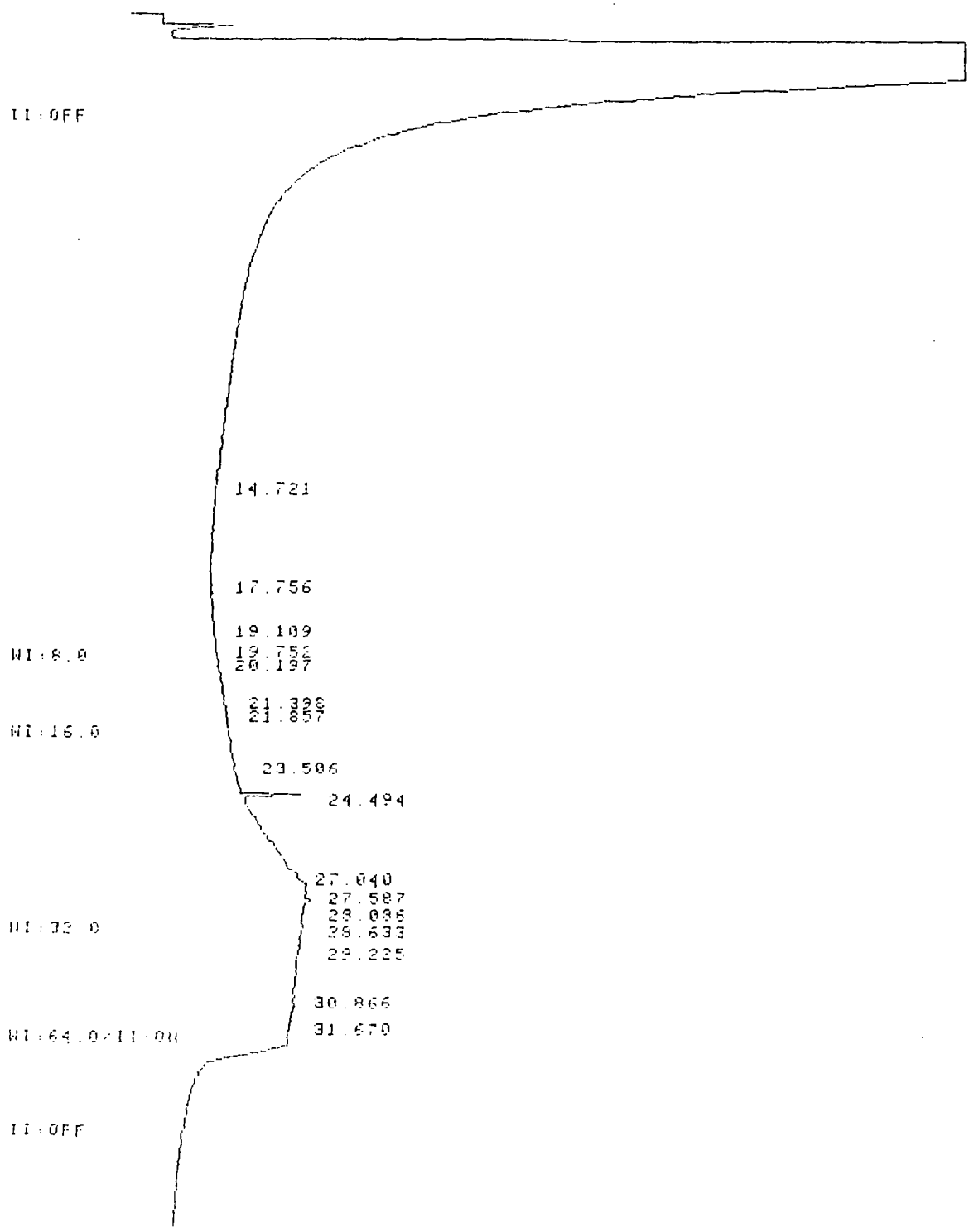
22 #14041 SS-9 5.06g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



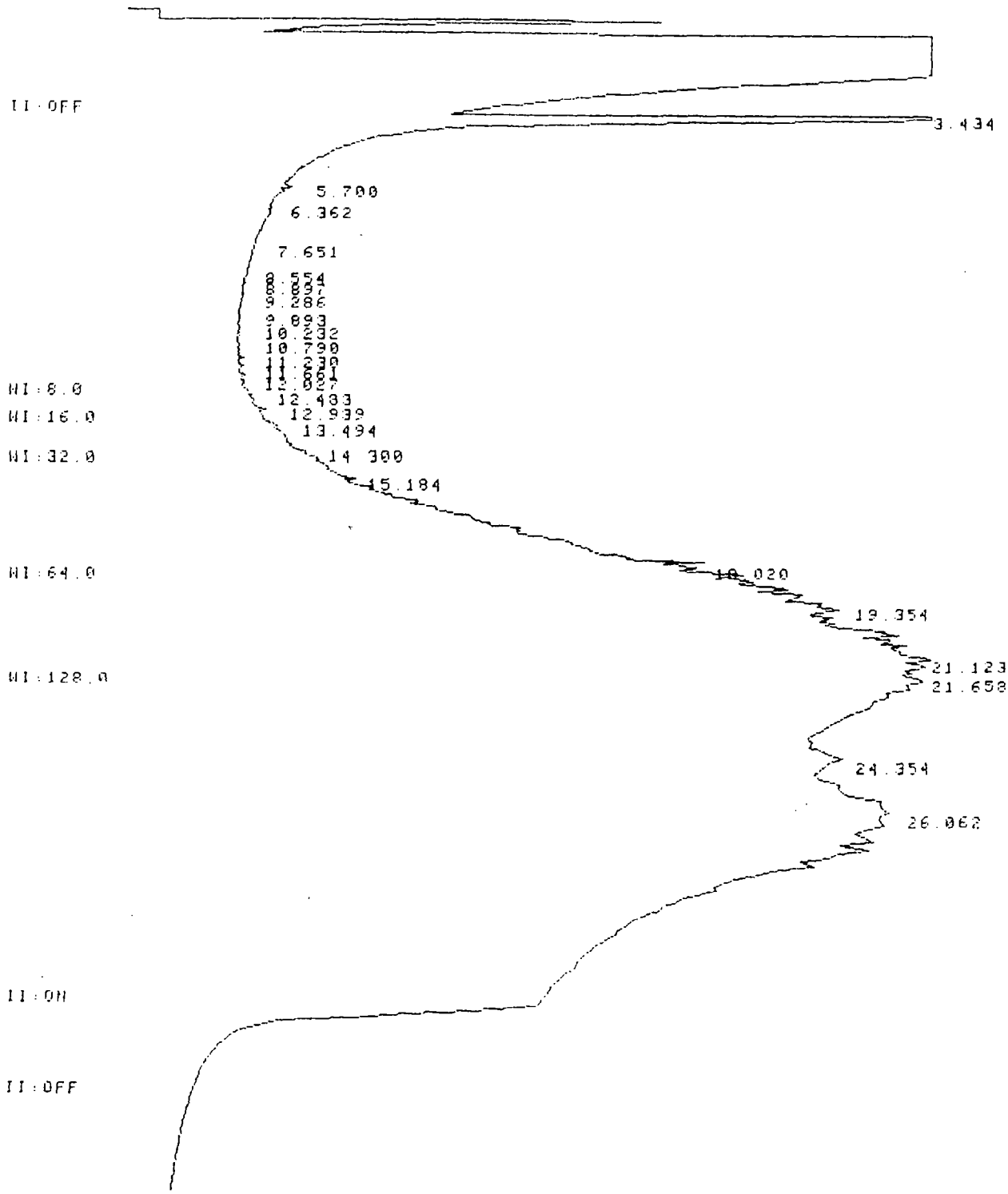
23 #19041 SS-10 5.13g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



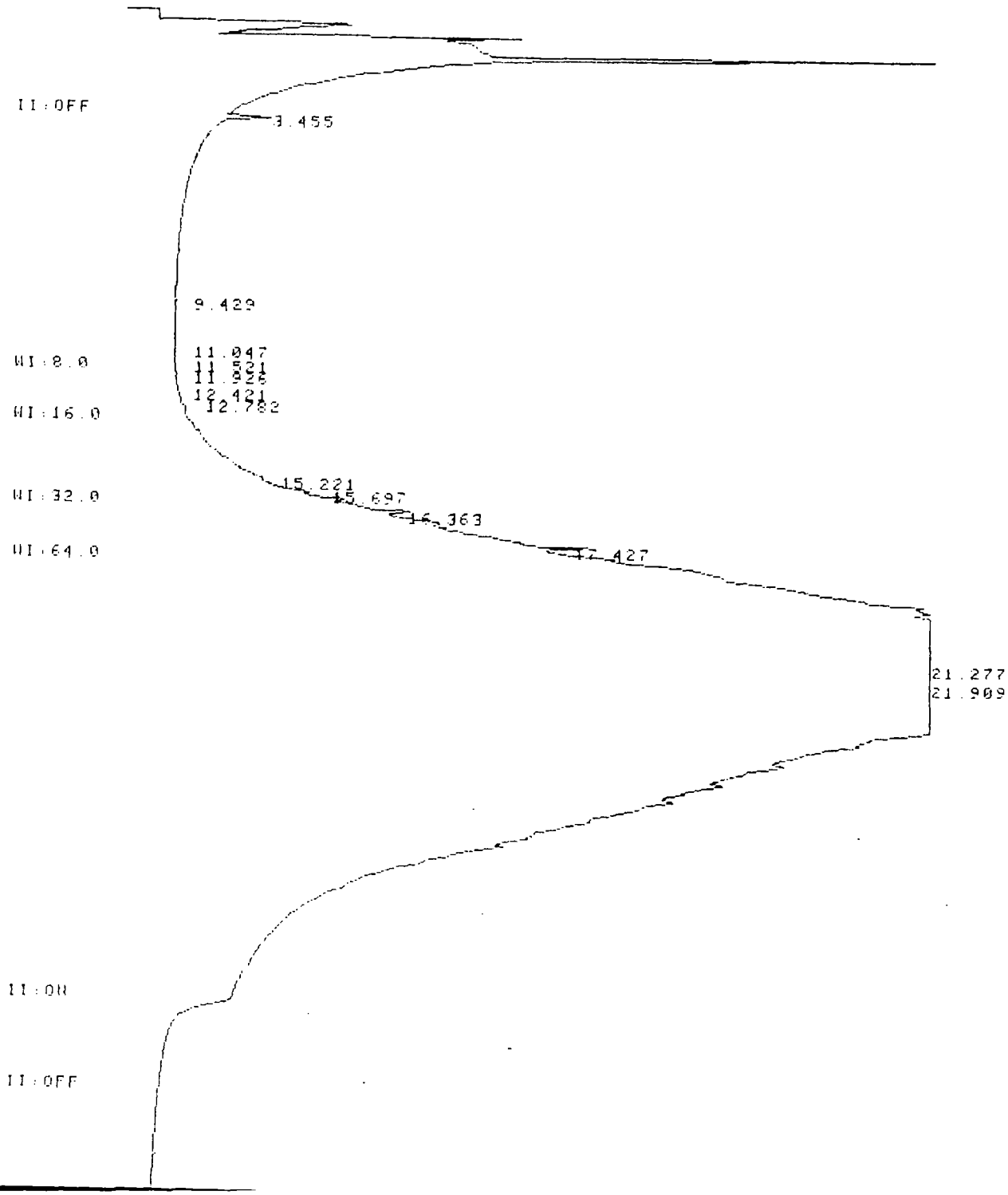
3 9 # 19041 SS-11 4.95g ~~5.044g~~

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



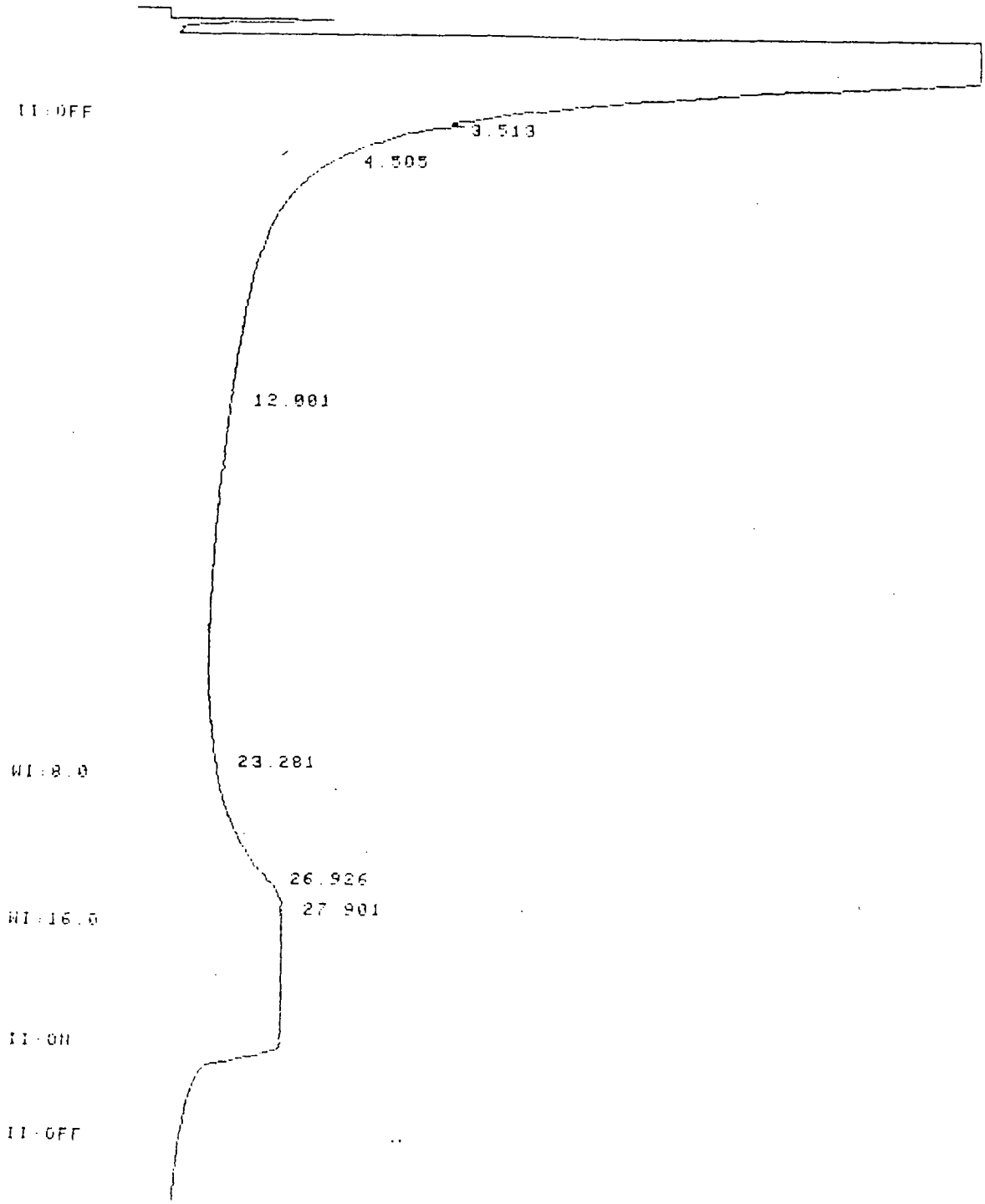
34 #14041 SS-12 3.56g

CHART SPEED 0.5 CM/MIN
ATTEN: 256 ZERO: 5%



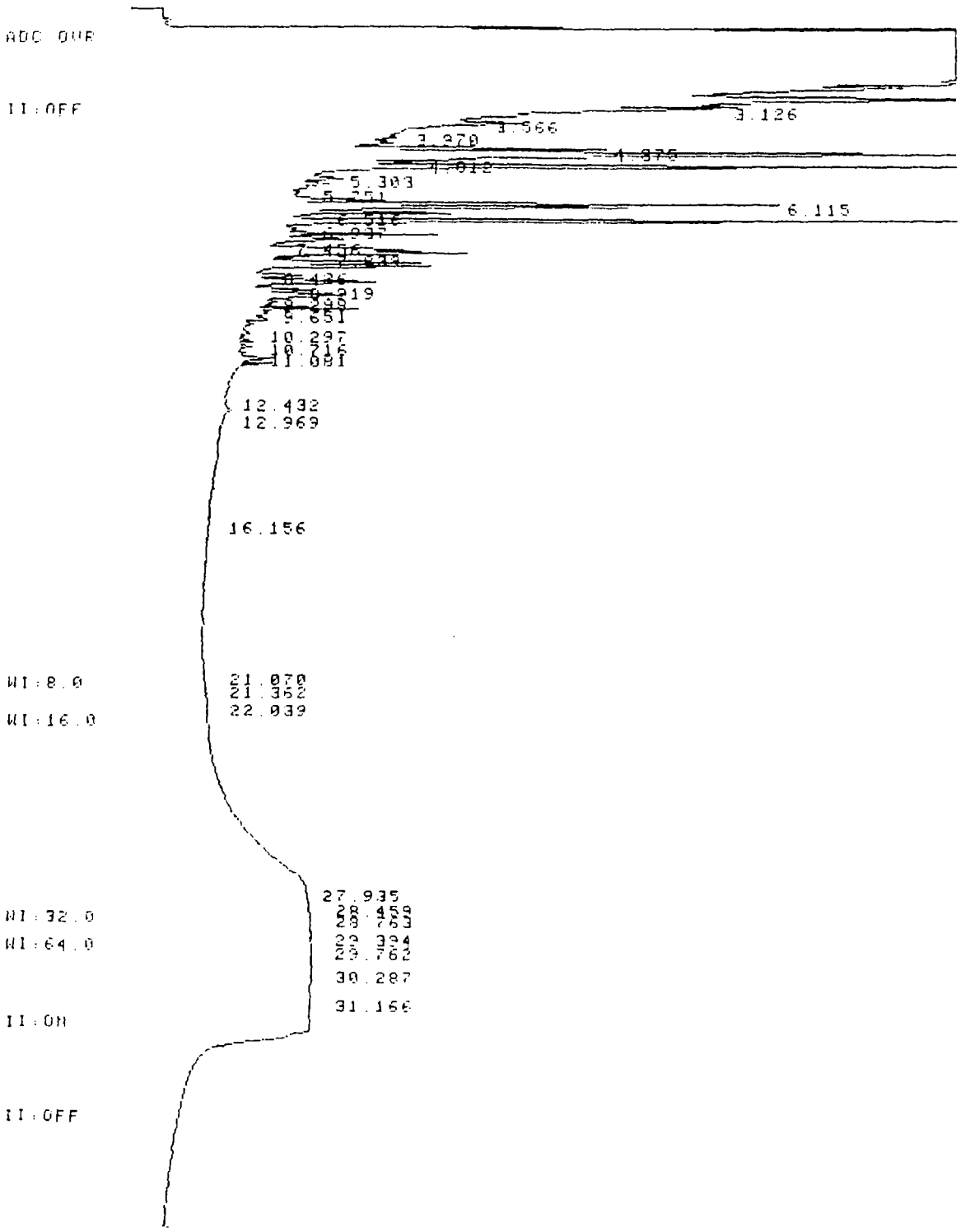
21 #19041 SS-13 4.91g

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



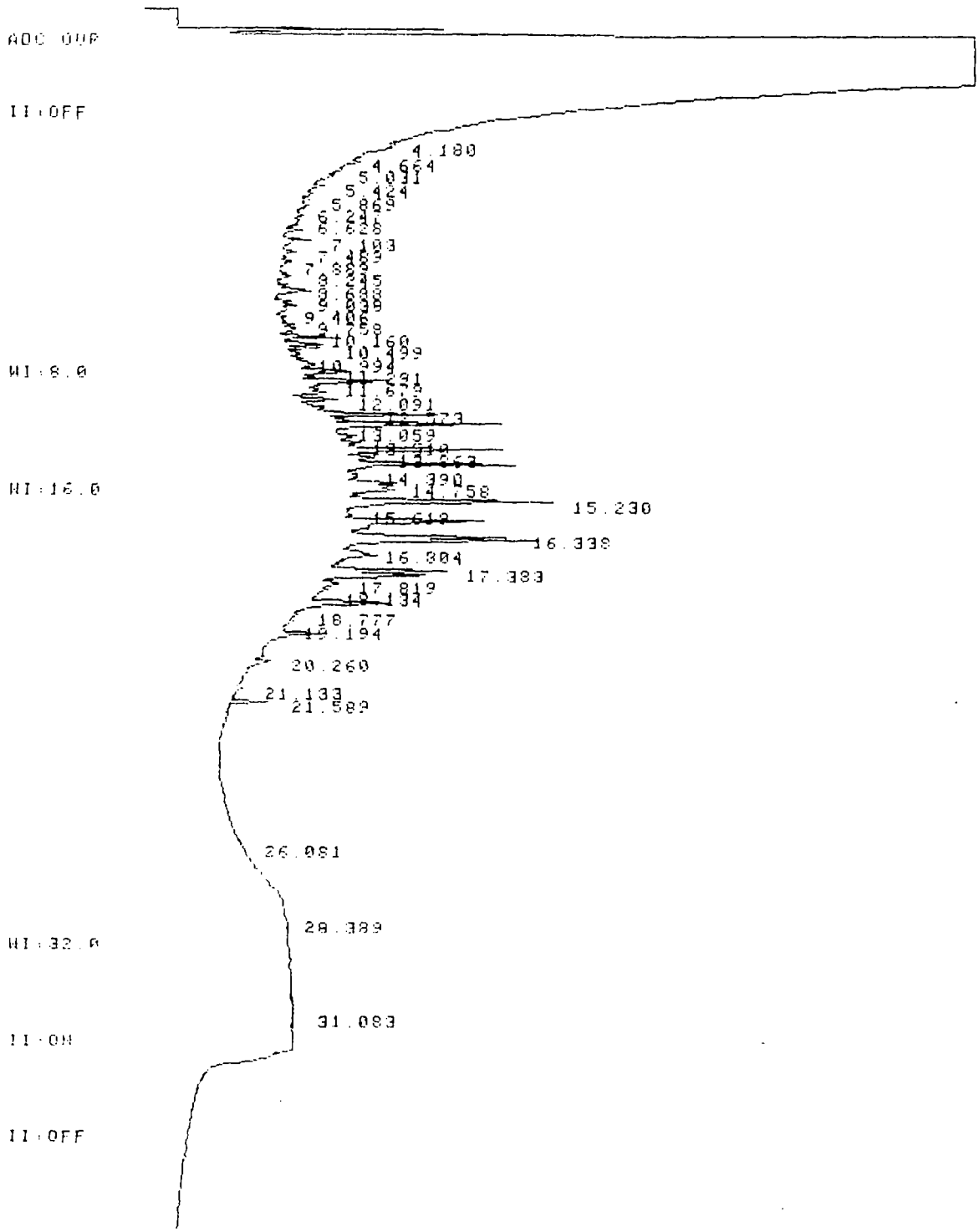
516.0 µg/m³ GASOLINE 0723-45-4

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



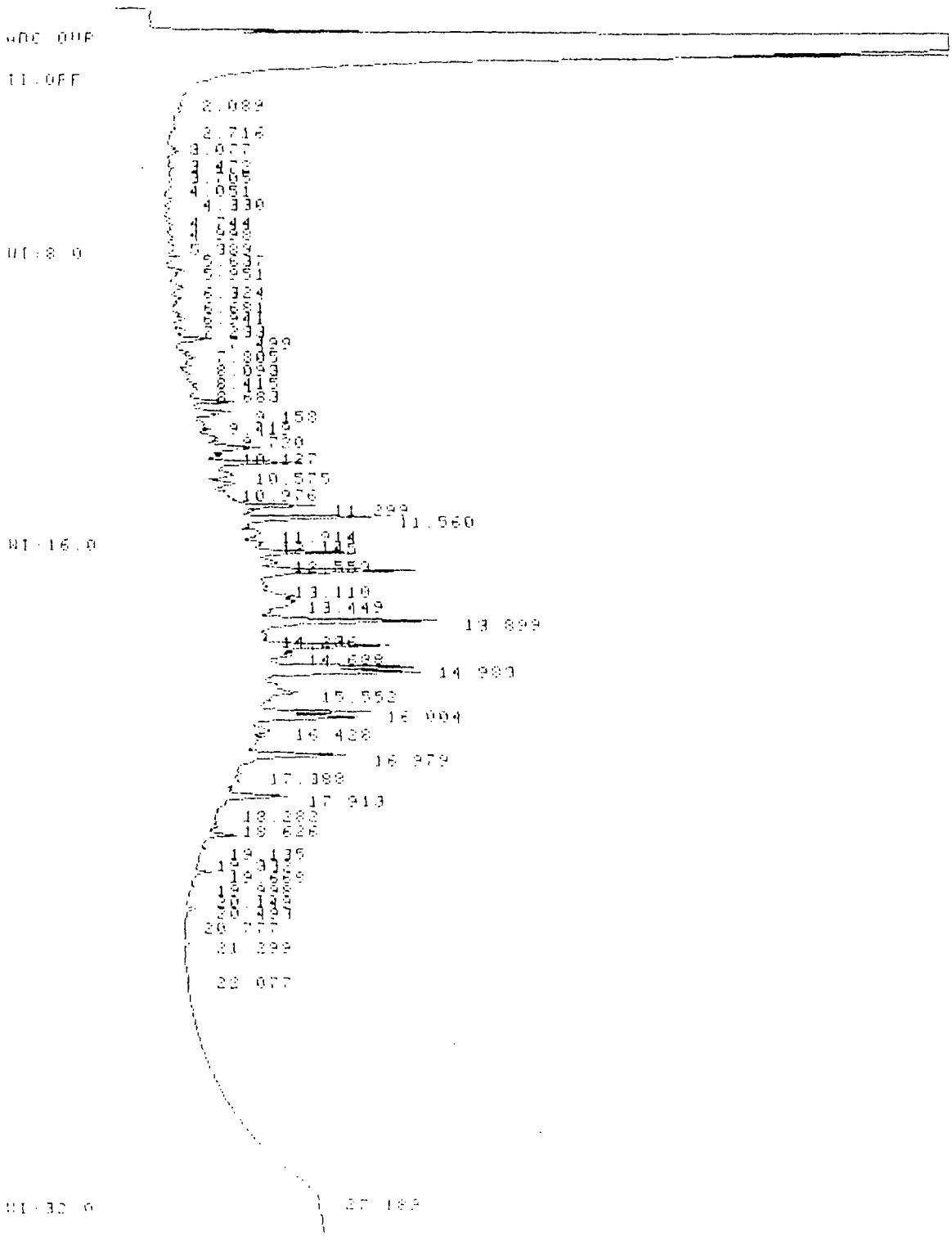
2 504.4 29/mi DIESEL 0723-45-3

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



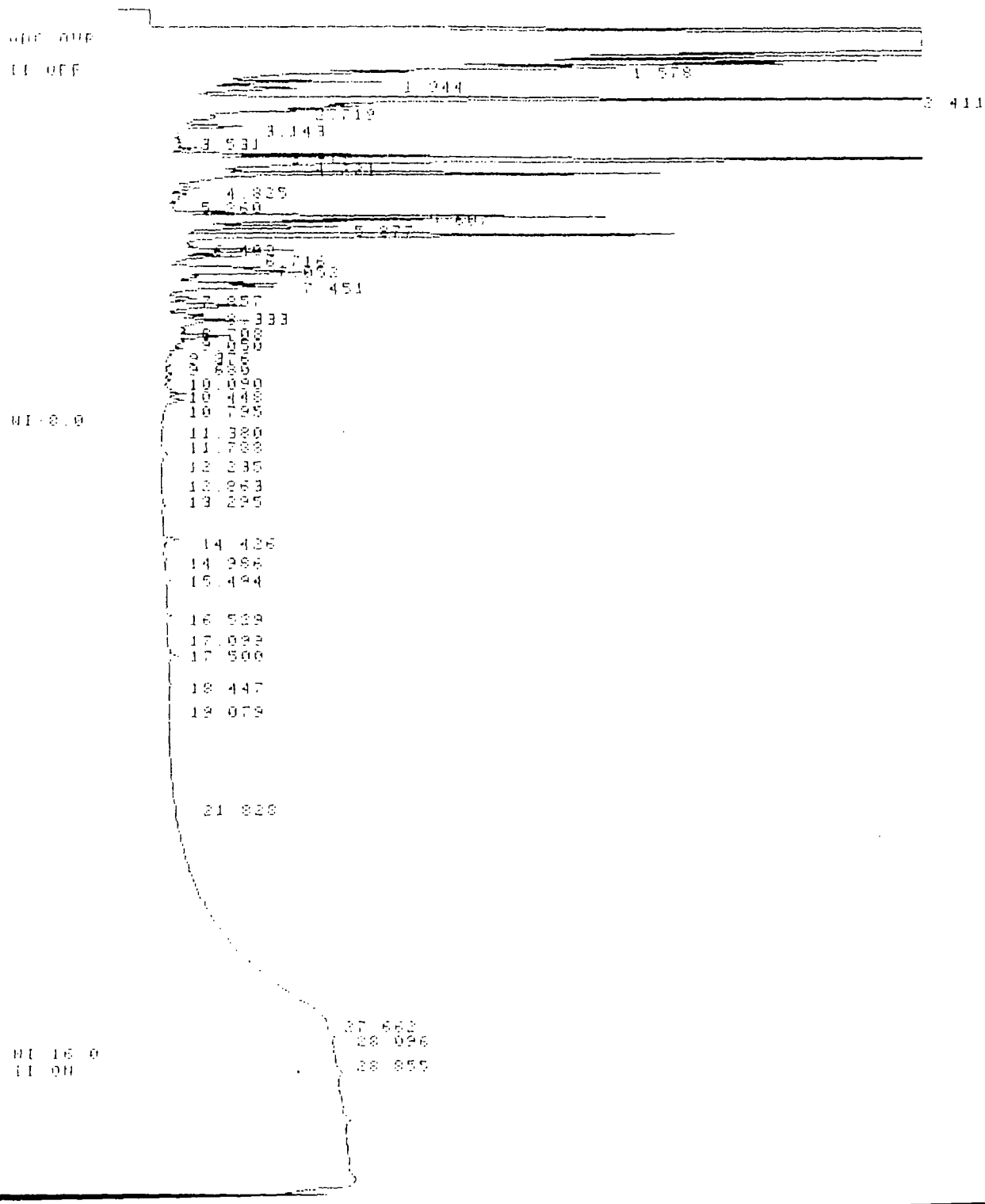
2 509.4 µg/m DIESEL 0723-45-3

CHART SPEED 0.7 CM/MIN
ATTEN: 64 ZERO: 5%



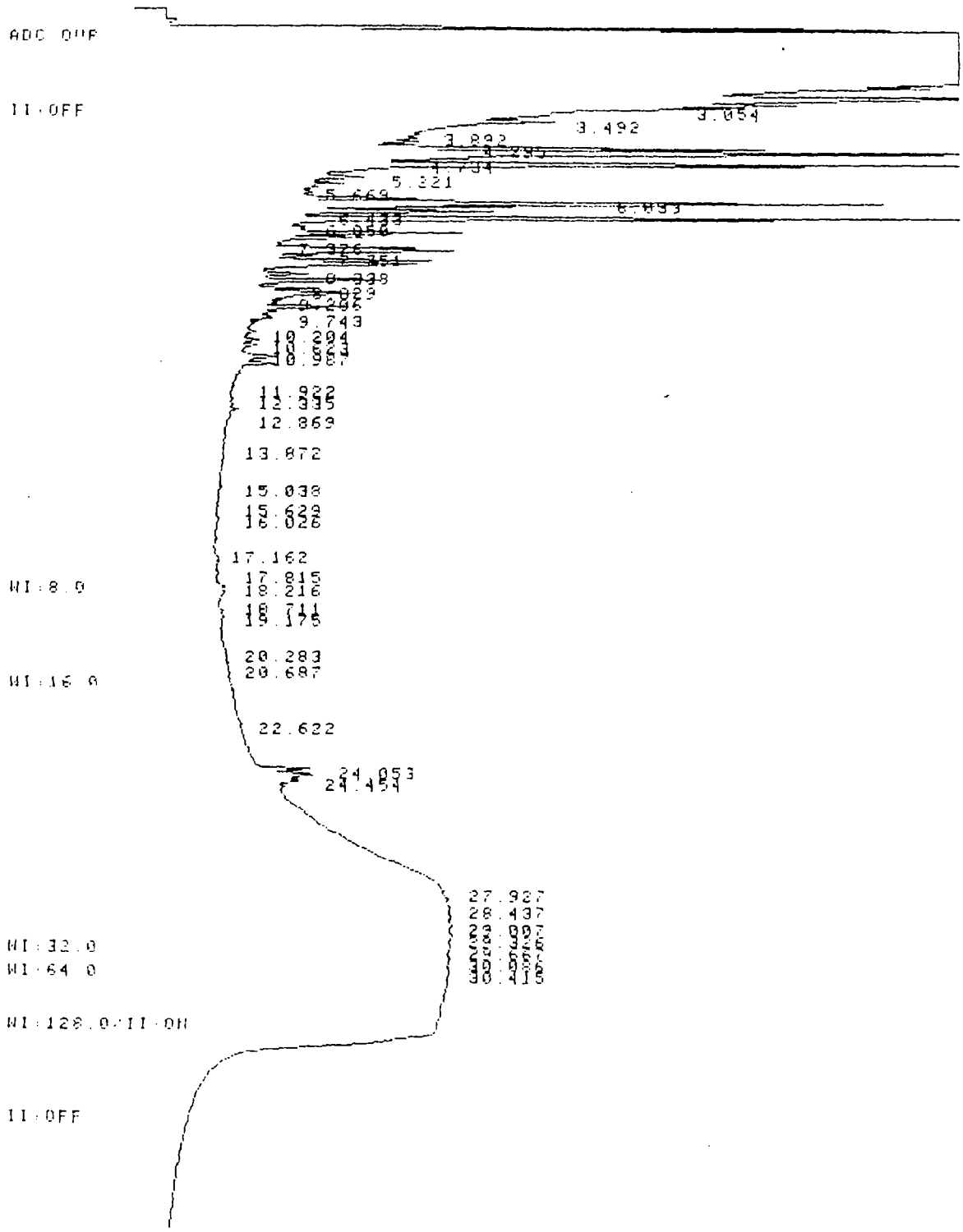
516.0 µg/ml GASOLINE 0723-45-4

CHART SPEED 0.6 CM/MIN
ATTEN: 64 ZERO: 5%



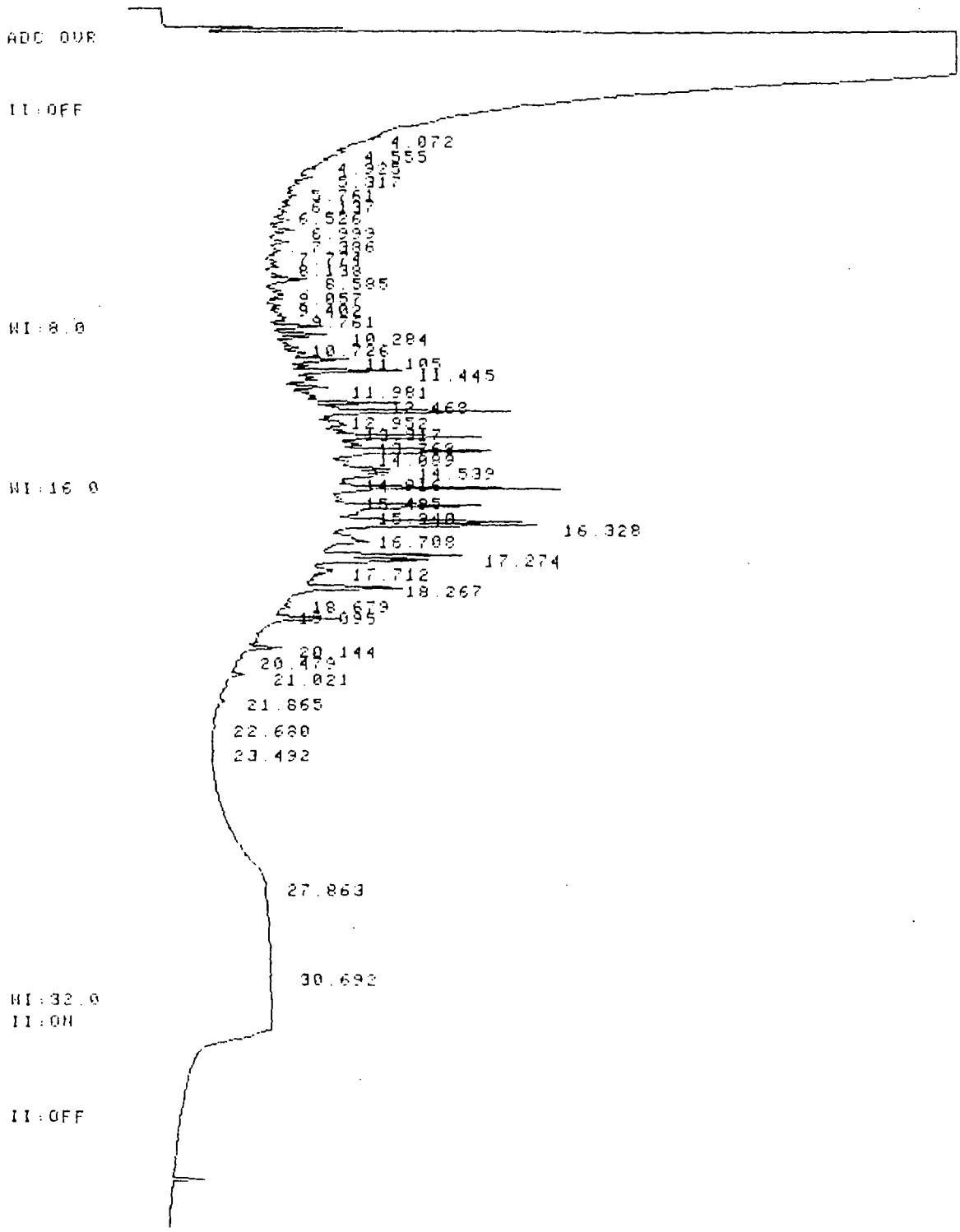
40 516.0 ng/ml GASOLINE 0723-45-4

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



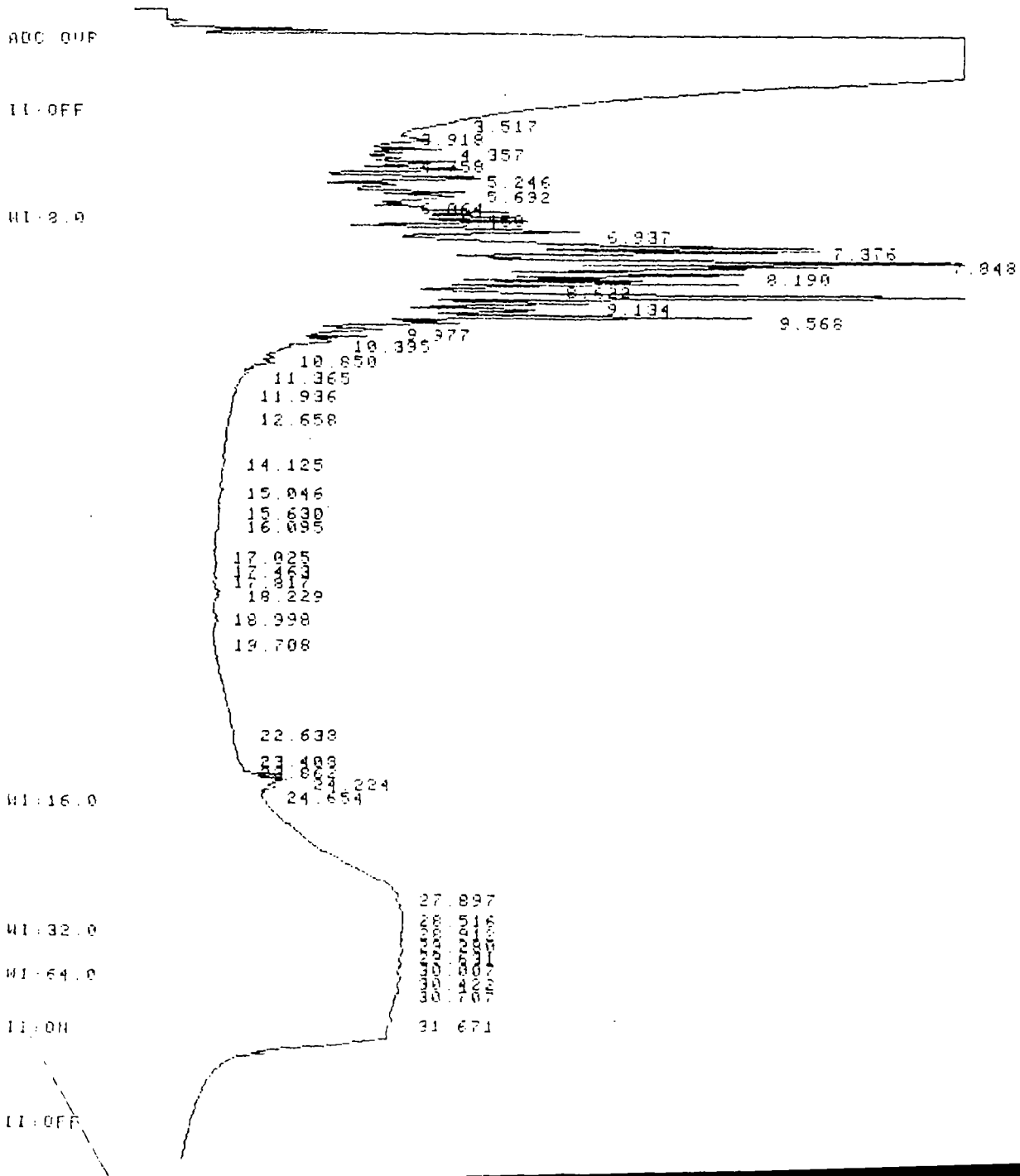
27 509.4 ng/mL DIESEL 0723-45-3

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



38 433.6 ng/ml SPIRITS 0723-45-2

CHART SPEED 0.5 CM/MIN
ATTEN: 64 ZERO: 5%



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